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Reorganisation of Nationalised Transport

MUCH has been written in the press, since the present Government took office, of plans for reorganisation of the British Transport Commission and its Executives, including abolition of some of the latter. There has been talk of a "new plan" for nationalised transport, which would involve the regrouping of the transport agencies on a Regional basis. It is hardly surprising that the newly-appointed Secretary of State for Co-ordination of Transport, Fuel & Power, Lord Leathers, and the Minister of Transport & Civil Aviation, Mr. J. S. Maclay, should begin an examination of the national transport system, especially in the light of the Conservative Party declared intention to reorganise it in groups of more manageable size and of repeated Conservative statements during the Labour Government's *régime* that the Hotels and some other Executives of the British Transport Commission should be abolished as unnecessary. The idea of regrouping nationalised transport Regionally, with all forms of publicly-owned transport under the supervision of a principal Regional officer or manager, is by no means new. We have long advocated it as combining the advantages of integration and of decentralisation. Whatever the case for and against transport integration as a policy, it is now too late to unscramble one form of transport without depriving the others of the chance of commercial success; that is not to say that the present Government is not right at least in arresting the process of nationalisation as far as it has gone. It would, moreover, be comparatively easy for the Chief Regional Officers of British Railways to assume responsibility for the operation of refreshment-car services, railway hotels, and docks within their Regions, just as the General Managers of the main-line railways were responsible for these activities before nationalisation. Decentralisation in nationalised transport is badly needed; one of the factors which have militated most against efficiency in the existing structure is too close a control by the centre. Even although in British Railways, for instance, a certain degree of centralisation is inevitable to achieve economies—as a measure, in fact, of rationalisation—the constant necessity to refer matters to higher authority is wasteful of effort. One of the greatest disadvantages of centralisation, however, is the lowering of the status of Regional and District Officers; to improve that status would greatly enhance efficiency by raising morale.

Nationalised Undertakings in Parliament

A GOVERNMENT proposal to set up a Select Committee to consider the problem of Parliamentary questions on nationalised industries was announced last week by Mr. Harry Crookshank, Leader of the House of Commons, as recorded on other pages this week. The problem is how far Parliament is the proper forum for questions on undertakings for which Parliament is ultimately responsible and how far the boards to which responsibility for management has been delegated by Act of Parliament should be left to manage their own affairs. The matter was the subject of a paper read to the Institute of Transport Congress by Mr. David Renton, M.P. for Huntingdonshire, and discussed in this journal last summer. Although Mr. Renton made a good case for more time in the Commons for the broader questions of nationalised transport, little can be said for Parliamentary questions on detailed matters of day-to-day working of, for instance, the railways. The argument that some public undertakings, such as the Post Office, are the legitimate subject of detailed questions and others not, such as transport, on which such questions are referred to the British Transport Commission, is not cogent. Nor is it true that the B.T.C., for instance, and its Executives need the publicity of Parliamentary questions as a spur to greater activity and efforts to economy in public money. Even with the present amount of questions in the House, much valuable time is wasted on referring detailed questions on railway matters to the Chairman of the B.T.C., and thence in turn to the Railway Executive. The Commission moreover and its Executives have in their Public Relations Officers the means of supplying detailed information on their activities to all who enquire.

Town Planning and the Railways

THE extent of the burden placed on various departments of the railways, and especially at Regional headquarters, by compliance with the Town & Country Planning Act, 1947, is shown by Mr. R. G. Henbest, Estate & Rating Surveyor, Western Region, in his recent paper on the effects of that Act on the Region, of which some account is given elsewhere in this issue. With the large route mileage of railways in this country, there are very few areas which can be developed by local authorities without involving railways. Conversely, the railways themselves can initiate little which does not affect many local interests. The procedure evolved in the Western Region to comply with the demands of authority as well as to protect railway interests is as simple as circumstances—including the ambiguity and apparently unnecessary complexity of some of the regulations—allow. Legislation such as the Town & Country Planning Act nevertheless makes heavy demands on railway manpower and on resources such as maps and stationery which might otherwise be used for more productive purposes.

Increased Freight Despatches from South Wales

FREIGHT train working in South Wales has been complicated recently by re-orientation of traffic. The railway layout was designed mainly for coal export from the valleys through local ports. In recent years, coal exports have decreased, with increased rail movement of Welsh coal to the Midlands and London, and the Welsh steel and light industries have developed; in addition, there has on occasions been import of foreign coal. All this has added to operating difficulties —despite new works at Margam, Nant Garw, and elsewhere—and through the only three gateways to South Wales: the Severn Tunnel, Gloucester, and Hereford. Further, the shortage of operating staff, though not so marked in South Wales as elsewhere, has increased the difficulty of working trains to and from the Midlands and London, where the shortage is acute. The accompanying figures, therefore, of despatches from South Wales, which show that in practically all weeks since the beginning of September the number of trains has increased compared with a year earlier, reflects great credit on the Western Region:—

Week commencing Monday	Freight trains run from South Wales to English destinations by all routes	
	1951	1950
September 3	653	671
" 10	681	632
" 17	671	671
" 24	681	658
October 1	687	649
" 8	689	648
" 15	653	667
" 22	670	636
" 29	694	612
November 5	693	679
" 12	718	687
Total ...	7,490	7,210

The number of trains rose by 280, or by 4 per cent., despite heavy increases in total tonnage conveyed by the Region, with corresponding calls on Regional resources and no improvement in the manpower and other factors beyond the railways' control.

Function of Public Relations

MANY organisations have in recent years given greater attention to their relationship with the public and there has been an attendant rapid growth in specialised departments designed to handle these matters. Paradoxically, these services have sometimes been misunderstood by the public and a worthwhile contribution towards clarification of the character and objectives of public relations was made by Mr. G. Dodson-Wells, Chief Public Relations Officer, London Transport Executive, in a paper to the Railway Students' Association on November 14. Public relations was a practical, commonsense, level-headed function of sound business management and he defined it as the disposition and characteristic spirit within an industry and the link with those outside. A public relations department was really a contradiction in terms for, separated from the rest of the activity of which it was a part, it would be in no position to fulfil its task. The function of public relations was to establish confidence, and the P.R.O.'s duty was to convey to his organisation a trustworthy picture of the public's attitude and to ensure that every contact made with the public contributed to confidence in the undertaking.

Institute of Transport Anniversary Luncheon

THE annual Anniversary Luncheon of the Institute of Transport, which was held on November 14, celebrated both the foundation of the Institute in 1919 and the grant of a Royal Charter 25 years ago. This year is also the silver jubilee of the Southern Africa Division and it was especially appropriate that Mr. W. Marshall Clark, a former General Manager of the South African Railways, was able to be present. The first of the two principal speakers, Earl Mountbatten, who, as Fourth Sea Lord, is in charge of Supplies & Transport, said that the first Royal Naval transport service had been organised as long ago as 1689; at the present time they had some 7,000 road motor vehicles. Referring to the railways, he said he had been impressed by the team spirit and enthusiasm shown by the Railway Executive, and by the fact that every year on British Railways more passengers were hauled than in any other country. Commenting on the phenomenal development of transport in recent years, Lord Brabazon dealt with some of the great changes in road and air transport. The railways, he considered, were hampered by never being up to date—they were always about to be developed —and it was a pity some progressive measures had not been carried out earlier.

New Third Class Sleeping Car

THE 36 new third-class sleeping cars which British Railways are building at a cost of some £8,500 apiece will offer a new standard of comfort in night travel for the passenger who cannot afford first class isolation. Instead of the seven four-berth compartments of the present third class cars they will have 11 twin-berths, with fully made-up beds, hot and cold water, and other amenities, including bed lights and individual Punkah Louvre ventilators. At an inspection of one of the cars at Euston on Monday, Mr. J. W. Watkins, Chief Regional Officer, London Midland Region, said that the first few of the 25 destined for that Region would be put into service between Euston and Glasgow; later, others would be available for Manchester, Liverpool, Perth, and Inverness. Eleven more are under construction for the Eastern and North Eastern Regions. The supplementary charge for their use between London and Glasgow will be 18s. 6d., compared with 12s. 6d. for the existing type of car, but for the extra 6s. the occupant receives good value and we are sure that the cars will be deservedly popular.

British Railways to Test 50-cycle Traction Systems

SUGGESTIONS that the brief reference in the recent B.T.C. report on "Electrification of Railways" to the desirability of a trial 50-cycle conversion in this country indicated a lukewarm interest have been disproved by the announcement last week that the L.M.R. Lancaster-Morecambe-Heysham line is to be the scene of experiments with this system. Arrangements for testing various methods and types of equipment have been made with the principal electrical manufacturers, a course suggested in these columns in our November 2 issue. At the time the chapter in the B.T.C. report on "Recent Technical Advances and Possible Future Developments" was written, the French experiments on the line from Aix-les-Bains to La Roche-sur-Foron had not begun, and the French National Railways themselves hardly could have foreseen that their enterprise would be rewarded so soon by enabling them to demonstrate six types of 50-cycle motive power to an international gathering, as they have done recently at Annecy. The variety of equipment shown indicated the extent of the investigations that will have to be carried out on the Lancaster-Heysham line. Any new developments emerging from this pooling of the experience of manufacturers who already have contributed so much to electrification overseas may influence the development of electric traction on a world-wide scale.

Trends of 50-cycle Development

SOME preliminary information on the Lancaster-Morecambe-Heysham 50-cycle experiments is given elsewhere in this issue. The existence of overhead equipment from the previous a.c. electrification is an advantage, but the line does not provide the ready-made facilities for inter-running over an existing d.c. route such as the French enjoy at Aix-les-Bains. This question of inter-running between different systems was weighed carefully in the B.T.C. electrification report recommendation of future standards for this country, and interest was shown in the

use of rectifiers in motor coaches intended primarily for operating on 50-cycle a.c. lines, because of the possibility of designing such vehicles for running also over adjacent sections electrified on the d.c. system. It is too early to say whether development here or elsewhere will tend eventually towards rectifiers, motor-generators, or 50-cycle traction motors, but it may be recalled that the first single-phase locomotive in the world—Oerlikon's No. 1 for the Seebach-Wettingen line—began its life in 1904 as a 50-cycle motor-generator machine. The system reluctantly abandoned by the a.c. pioneers has returned as a practical possibility in the light of nearly 50 years' technical progress. It will be curious if its future depends on the modern rectifier, which in the meantime has done so much for d.c. traction.

End of the North Sunderland Railway

THE North Sunderland Railway between Chathill, on the Newcastle-Edinburgh main line, and Seahouses, on the Northumberland coast, closed on October 27. It was a privately-owned light railway, 4 miles 6 ch. long, authorised on June 27, 1892, and opened for goods traffic on August 1, 1898; passenger traffic began on December 14, 1898. Since 1939 it has been managed by the District Goods Superintendent at Newcastle, and operated by an 0-4-0 tank locomotive, L.N.E.R. Class "Y7," and one N.E.R. four-wheel and two G.E.R. six-wheel coaches. Formerly, traffic was handled by an 0-6-0 Manning Wardle tank built in 1898 and a diesel locomotive built in 1933; both have been withdrawn. The mainstay of the line was the carriage of fish from the little resort and port of Seahouses; except at holiday times passenger traffic was light. A proposed extension to Bamburgh Castle was never carried out. Receipts were too meagre to justify renewal of the track to carry heavier locomotives, hence the recent decision to close the railway. Latterly the service has consisted of six trains each way daily, taking twenty minutes, including a stop at North Sunderland, the only intermediate station.

Railway Wages and Inflation

THE acceptance by the Railway Executive last week of the Railway Staff National Tribunal wage award was almost inevitable, as was the Executive's immediate request to the British Transport Commission to ask the Minister of Transport for authority for a fresh increase in freight charges, by an amount unspecified at the time we went to press, to offset the cost of the award. A somewhat similar situation arose last March, when, after the grant—though under considerable pressure from the then Labour Government and contrary to the findings of the Guillebaud Court of Inquiry—of wage increases by the Railway Executive, the Minister of Transport, Mr. Alfred Barnes, was asked to authorise a flat 10 per cent. increase in freight rates. Mr. Barnes consulted the permanent members of the Transport Tribunal in accordance with the procedure prescribed by the Transport Act, and was quick to decide in favour of the increase. Shortly afterwards, in April, not as the result of the insufficiency of additional revenue derived from the freight rate increases, but as soon as possible after nationalisation, in compliance with the Transport Act, 1947, the B.T.C. lodged the Passenger Charges Scheme, 1951, which is still being heard before the Transport Tribunal.

The present situation differs in some respects from that obtaining in March. In the first place, the Minister of Transport is now subordinate to a Secretary of State for Co-ordination of Transport, Fuel & Power; and as important issues of national economy are involved, consultation with the Chancellor of the Exchequer doubtless is necessary, which presumably must be effected through the Secretary of State. Secondly, the Railway Executive has not been subjected to external pressure; with the prevailing manpower situation, however, and the prospect of raising charges to meet the cost of wage increases, it would have been difficult for the Executive not to have accepted the compromise award already accepted by the railway trades unions. Thirdly, although the cost of the latest award, some £9·2 million in a full year, is less than that of the wage increase in March (£12 million in a full year) there is greater danger now of an inflationary process resulting from increased railway charges combined with the almost simultaneous, far-reaching wage increases in the engineering industry and in coal mining.

The immediate effect of a wage increase in an organisation with as many employees as the railways is bound to be reflected in a rise in charges. With the advances in costs of materials for many months and the time-lags between rises in costs and authority to raise charges—illustrated in the Passenger Charges Scheme, submitted eight months ago—it is hard to say how the revenue to be derived from an increase in freight charges in the near future could affect the finances of the B.T.C. Any increase in charges is bound to be unpopular. Many who are in favour of wage increases for railwaymen strongly resent the inevitable subsequent rise in railway charges—and railwaymen in their turn will resent the increased prices of consumer goods resulting from dearer rail transport. The present situation, with wage demands in constant and rapid succession, cannot continue without grave danger to the national economy. Much will depend on the financial policy of the new Government, which it is to be hoped will be able to maintain some stability in wages until prices fall.

Transport and the Human Element

NEVER can a large industrial group be a one-man show, for invariably a healthy spirit in any such concern is the work of a team, though almost invariably this is brought about by the ability of the man at the head of the organisation to imbue his staff with the right spirit. The greatest problem confronting any large-scale industrial group, and especially a railway undertaking with its staff often scattered in twos and threes over a very wide area, must always be to encourage a sense of responsibility to the trader and travelling public among the members of its smallest unit. Without their wholehearted assistance in this respect, indeed, earning power will gradually wither and at the same time chances of promotion and increased pay for the staff will fade. This was the main theme of a paper read by Mr. C. E. R. Sherrington, Director of Research Information Division, B.T.C., to the Southern Section of the Institute of Transport at Southampton on November 14, when he expressed the view that in transport in general the importance of the human interest takes precedence over all else. Lack of this element in his opinion is at the root of most of the troubles facing industry at the present time.

Mr. Sherrington pointed out that, during past decades, one of the attractions of service on British railways was that, although salaries and wages often were lower than those paid in other industries, and hours of work frequently longer, the recruit felt that he was entering a socially productive service which earned its keep. Today, one of the more pressing railway problems was the difficulty in recruiting staff, and, though this was due in part to the policy of full employment which many economists doubtless considered socially proper, there was a further reason which in his opinion stood out clearly, namely, that with a growth in the size of staff, personal touch must necessarily be reduced. There was a general trend in this country for the young man entering on his career to choose that industry which exemplified the personal touch in its strongest form. Personal touch and the human spirit were inextricably interlocked, and, though one could have the former without the latter, one could not have the latter without the former. But, although the problem of making valid the quality of human spirit becomes greatly accentuated as the number of employers increases, there are many examples among some the largest railways and other forms of transport where the personal touch has proved of immense value, many of which were referred to in the paper.

In the great majority of cases, emphasised Mr. Sherrington, transport is a public utility, and like Janus must face

two ways. First, there is the question of human relationship as it affects the staff, *i.e.*, internal; and, second, there is the friendly relationship to be fostered at all times with industry, traders, agencies, and so on, whose goodwill is essential for the success of the transport system in the long run. His final words are: "Let the man in transport feel the touch of human spirit, and in nine cases out of ten he will pass it on."

British Transport Commission Traffic Receipts

BRITISH Railways traffic receipts for Period 11, to November 4, at £28,461,000 compare with £29,644,000 for the preceding four-week period. Passenger receipts, at £6,871,000, fell seasonally from £8,452,000 for Period 10. The fact that for Period 11 they are very slightly above last year's figure may in some degree be the result of the London Passenger Charges Scheme, which came into force on October 1, 1950. Parcels and allied traffic receipts are slightly up on Period 11 of 1950, but a decline in traffic is shown by failure to achieve the 10 per cent. increase in takings which should follow on the rate increase last April; there is moreover a decline from Period 10, from £2,652,000 to £2,548,000, of which road competition seems to be the cause, given increased production.

—	Four weeks to November 4		Incr. or decr.	Aggregate for 44 weeks		Incr. or decr.
	1951	1950		1951	1950	
British Railways—	£000	£000		£000	£000	
Passengers	6,871	6,867	+ 4	92,610	92,445	+ 165
Parcels, etc., by passenger train	2,548	2,513	+ 35	27,844	25,747	+ 2,097
Merchandise & livestock	8,375	7,851	+ 524	83,185	74,107	+ 9,078
Minerals	3,123	2,834	+ 289	30,389	27,206	+ 3,183
Coal & coke	7,544	6,682	+ 862	76,383	64,929	+ 11,454
	28,461	26,747	+ 1,714	310,411	284,434	+ 25,977
Road Passenger Transport: Provincial & Scottish—						
Buses, coaches & trolleybuses	3,150	2,763	+ 387	37,224	32,947	+ 4,277
London Transport—						
Railways	1,234	1,246	— 12	13,587	12,234	+ 1,353
Buses & coaches	2,646	2,439	+ 207	28,530	26,174	+ 2,356
Trolleybuses & trams	717	827	— 110	8,210	8,955	— 745
	4,597	4,512	+ 85	50,327	47,363	+ 2,964
Inland Waterways—						
Tolls	71	69	+ 2	736	628	+ 108
Freight charges, etc.	84	62	+ 22	783	716	+ 67
	155	131	+ 24	1,519	1,344	+ 175
Total	36,363	34,153	+ 2,210	399,481	366,088	+ 33,393

Merchandise and livestock receipts show a decline in traffic over 1950 in the light of the April rate increase, and are only very slightly up on Period 10. Mineral receipts increased 10 per cent. over Period 11 of last year, and at £3,123,000 are up on the preceding period (£2,905,000). Coal traffic receipts were nearly 13 per cent. up on Period 11 of last year, and slightly up on the preceding period, partly because this is a season of increased coal output; against this, increased coal movement by rail, as for instance of coal from South Wales to the Midlands, with resultant longer rail hauls, must be taken into account.

Total London Transport receipts were slightly above last year's, both being covered by the London Charges Scheme. The increase was in buses and coaches; railway receipts were below those for Period 11 of last year; and tram and trolleybus takings declined as the result of abandonment of tram routes. There is no obvious cause of receipts remaining so little below those for the preceding period, when British Railways passenger takings show a marked seasonal decline; one factor may be the high proportion of business travel which would minimise summer peaks, but the closing of the South Bank Exhibition at the beginning of October might have been expected to result in a greater drop in receipts for Period 11.

Inland waterways receipts rose some 18 per cent. over last year, and those from freight charges 9 per cent.; these receipts, however, fluctuate so much that no deduction is possible.

PERCENTAGE VARIATION 1951 COMPARED WITH 1950

	4 weeks to November 4	44 weeks to November 4
British Railways—		
Passengers	+ 0·05	+ 0·16
Parcels, etc., by passenger train	+ 1·3	+ 8·1
Merchandise & livestock	+ 6·6	+ 12·2
Minerals	+ 10·1	+ 11·7
Coal & coke	+ 12·9	+ 17·6
Total	+ 6·4	+ 9·1
Road Passenger Transport	+ 14·0	+ 12·9
London Transport—		
Railways	— 0·9	+ 11·0
Buses & coaches	+ 8·4	+ 9·0
Trolleybuses & trams	— 13·3	— 8·3
Total	+ 1·8	+ 6·2
Inland Waterways	+ 18·3	+ 13·0
Aggregate	+ 6·4	+ 9·1

A Signalling Centenary

JUST one hundred years ago, Edward Tyer, then a young man, became attracted to the application of electricity to railway working, particularly in securing immunity from accident and in providing facilities for dealing with heavy traffic expeditiously. Others had turned their attention to the same problem, and the necessity of applying the space interval, if any reasonable degree of safety was to be achieved in train running, had been pointed out ten years before by Cooke, who had made a special application of that principle on a line in Norfolk. But, though it was realised that electrical train signalling of some kind would have to be adopted, the extent of electrical knowledge and the lack of practical experience were such that there was much difference of opinion as to the best way of carrying this principle into effect. There was also the problem, one which is still with us, of not merely installing the apparatus but of maintaining it.

Edward Tyer, who was born in 1830 and died in 1912, saw that a considerable demand for electrical signalling apparatus would arise, and he had his own ideas as to the forms it should take. In 1851 he established the business still known by his name. When he entered this field, on which he was to leave so lasting an impression, almost everything had still to be learned, and the problems awaiting solution were not merely technical, but practical as well. The building up of block regulations went forward slowly, but in a booklet describing his various designs of instrument issued in the early 70's, Tyer was able to include a set which found acceptance on several lines. His block telegraph had been adopted by several foreign railways and many of its details have remained unaltered down to this very day.

It is in connection with single-line working that his name will remain specially remembered. The train-staff system, when supplemented by tickets, had offered in conjunction with the block telegraph a fairly satisfactory and safe system of operating single lines, and it has persisted to this day, but it suffered from lack of flexibility. Tyer took a decisive step by devising the electric tablet system from which are descended all the other electric token arrangements now widely known. His provisional patent is dated March 30, 1878, and the complete specification September 23. This initial apparatus was uni-directional, *i.e.*, there were separate instruments for the two directions of running, with separately marked tablets called staffs; the two sets of instruments were interlocked. The first practical trials seem to have begun trials on October 9, 1879, between Troutbeck and Penruddock on the Cockermouth, Keswick & Penrith Railway, and the instruments were approved by the Board of Trade in August, 1880. Shortly after, this apparatus was taken away and applied on the Callander-

Oban line of the Caledonian, while another installation had been made on the Morningside branch of the same railway. Improved designs were soon produced and by 1888 the Caledonian had 180 miles so protected. The first lines in England to make much use of the system were the old Eastern & Midlands, later part of the Midland & Great Northern Joint Railway, and the Somerset & Dorset Joint Railway. The first leading main line in England to install the tablet was the Midland, between Staveley and Elmton & Creswell in 1888, late in which year the first trials with the Webb and Thompson electric staff were made on the L.N.W.R. between Bedford, Blunham, and Sandy. Later developments are well known. This centenary of the establishment of a signalling business by Tyer serves also as a reminder of the important part played in the evolution of signalling by other inventors and firms.

A Plan for Glasgow Transport

THE electrification, at a cost of £10,250,000, of most of the suburban and interurban lines radiating from Glasgow is one of the chief recommendations made by the Glasgow & District Transport Committee, under the chairmanship of Sir Robert Inglis, in its report* to the British Transport Commission, by which it was appointed in August, 1949. In our September 10, 1948, issue we published details of a report by the General Manager of Glasgow Corporation Transport Department, based on a planning report by the City Engineer, in which he envisaged a rapid transit system in Glasgow and suburbs, composed of existing steam-operated lines electrified, and new electric lines in tunnel or on the surface. The Inglis Committee had much wider terms of reference—" to consider any improvements of the existing facilities provided by the railways, the Scottish bus group, and Glasgow Corporation, which would appear to follow the policy of integration of inland transport laid down by the Transport Act, 1947."

The Committee finds that the existing suburban railways in Glasgow have sufficient capacity to cater for three times their present traffic; with electrification the number of trains in the peak hours could be increased by 37 an hour; as a provisional measure it proposes to increase the steam services and provide new halts to serve new housing development. The electrification plan is in two stages, at an estimated net cost of £10,236,540; they include the building of eleven halts and a new link near Cathcart, besides electrification of lines within an area bounded by Wemyss Bay, Helensburgh, Balloch, Milngavie, Coatbridge, Airdrie, Bothwell, East Kilbride, and Uplawmoor. At a later stage, other works, considered desirable but less urgent, would be undertaken; in this category are the combination of Buchanan Street and Queen Street High Level termini, the building of stations at West Campbell Street and near Kelvin Hall, and further electrification, to Motherwell, Hamilton, and Ayr. Electrification between Glasgow and Edinburgh *via* Falkirk is described as being dependent on the construction on the proposed new North terminus (Buchanan Street-Queen Street), but this consideration is really outside the scope of the report.

The report realistically stresses that greater use should be made of existing facilities before new capital expenditure is embarked on. The railways must be placed in a position to attract more traffic, thereby lessening the severe congestion on the roads. Rail and bus fares should be brought more into line, and through interavailable bookings *via* defined traffic exchange centres established. The Glasgow Corporation transport services are recognised as essential within the city boundaries, but beyond the city it is recommended that all road passenger transport in the Clyde Valley should come under the Scottish Bus Group; in the event, the greatly increased capacity of the railways should enable a reduction of bus services running into the city to be made.

* Passenger Transport in Glasgow and District: Report of the Glasgow & District Transport Committee. Published by the British Transport Commission at 7, Castle Street, Edinburgh, and at 55, Broadway, London, S.W.1. Price 7s. 6d.

Metal Economy on British Railways

UNTIL nationalisation, the four main-line railways each used metals, especially non-ferrous, with widely differing compositions for the same components; non-ferrous metal reclamation policy also varied. For many reasons it is essential that in future all Regions should use, if at all possible, the same metal for the same purpose. In his paper entitled " Economy by Standardisation of Alloys and of the Method of Reclamation of Scrap Metals " read at a recent Institute of Metals discussion on metal economies, to which reference was made in our October 19 issue, Mr. C. Dinsdale, Regional Works Metallurgist, Eastern & North Eastern Regions, outlines the problem which existed, and how it was tackled, and describes some of the economies which it is hoped to achieve by the standardisation of practice. Most of the paper is devoted to non-ferrous metals, as the major problem, and affording greater opportunities of economy.

British Railways, Mr. Dinsdale points out, are at present using 20,000-30,000 tons of non-ferrous metals and alloys each year on their rolling stock alone. The former L.N.E.R. Class "A.1 " locomotive, for example, contains nearly 5½ tons of non-ferrous metals and alloys, including 3¼ tons of copper firebox plates and stays, 38 cwt. bronze axleboxs, 3 cwt. bronze boiler mountings, 2 cwt. bronze bushes and bearings, and 100 lb. white metal. In addition, non-ferrous metals are used by the civil engineer in buildings, the signal & telegraph engineer for cables and telephone purposes, and the electrical engineer for transmission purposes and overhead wiring and bonds on electrified systems.

When some 120 railway undertakings were merged into the four main-line railways in 1923, each of the four groups was soon faced with the task of standardising the many and varied cast bronzes and brasses, white metals, packing metals and so on which the constituent companies had been using in their rolling stock. Thus, after extensive trials, the L.N.E.R. in 1933 introduced seven standard cast bronzes and brasses, and two compositions of white-metal for use throughout all its works. All the groups standardised similarly, but there was apparently no attempt at all-country standardisation in respect of cast bronzes and brasses. The Association of Railway Locomotive Engineers (including Carriage & Wagon Superintendents), did, however, recommend three standard grades of white metal compositions, and these were eventually used by the G.W.R. and L.M.S.R. Most of the alloys introduced after grouping lasted with minor modifications until about 1941, but the L.M.S.R. introduced a new series of alloys in 1940 with a lower tin content.

The need for tin economy during the war resulted in modifications of alloy composition and practices. In 1942, the L.N.E.R. reduced the number of its cast bronzes to two, introducing 85.5.5.5 leaded gunmetal for many components in place of 13, 10, and 7 per cent. tin bronzes. Lead-base white metal was used for some wagon, carriage, and locomotive bearings in place of tin or tin/lead base alloys, and intermediate tin/lead alloys instead of high tin metal, but some railways preferred to reduce white metal lining thickness instead. These substitute alloys did not however prove too satisfactory. Nationalisation in 1948 involved standardisation of non-ferrous metals and practices in all Regions. In 1948, Mr. R. A. Riddles, Member of the Railway Executive for mechanical and electrical engineering, set up a committee of representatives from the Regions and the Stores Department to investigate the matter, under the chairmanship of Mr. T. H. Turner, then Chief Chemist & Metallurgist, E. & N.E. Regions.

In the cast bronze and brasses group, where there was a wide range of alloys used in the Regions for the same components, fine alloys were recommended and introduced, and standardisation of use was effected, with great resultant economies in tin and lead against increased zinc consumption. The 18 white metal alloys, with 13 different compositions, were reduced to four. The standardisation of the purposes of different grades is not yet complete, but trials are being carried out with white metals with lower tin content. With wrought metals and soft and brazing solders,

British Standards are already in use in all Regions. Much cast iron and non-metallic packing is used for packing, and seven non-ferrous alloys were replaced by three standard alloys; but the quantities involved are small. In the case of virgin metals bought in ingot form for use in foundries and workshops, specifications were issued, as no British Standard exists for the metals concerned.

Although some Continental and American systems have long made much use of light alloys in rolling stock construction, in this country, Mr. Dinsdale states, little use is being made of such alloys. Alpax vacuum and steam heater pipes and connections, aluminium-alloy castings for the road motor departments, and foundry patterns, and aluminium alloy carriage fittings appear to be the main uses. Where aluminium alloy was used in the wrought form for rolling stock construction it was only in an experimental stage. When light alloys are required the material will be ordered to a B.S. specification.

For the use of Railway Executive designers, metallurgists and so on, the committee compiled a "Schedule of Non-Ferrous Metals & Alloys." This was along the lines of B.S./S.T.A.7 and contained details of the chemical composition, properties and uses of all standard alloys.

In the reclamation and renovation of non-ferrous scrap, British Railways differ from most engineering concerns in that metals are in constant circulation throughout the system, returning periodically to railway workshops for re-use or scrapping. The re-use of as much non-ferrous scrap as possible was an economic proposition, and all the former railway companies carried out a varying amount of reclamation and renovation; 27,000 tons of some 80 types of non-ferrous metal scrap have been produced each year by British Railways as the result of machining operations and the breaking-up and repairing programme, 15,000 tons being re-used and 12,000 sold. The metals economy committee also drew up and instituted a standard nomenclature for scrap.

A further policy committee has been formed to recommend specifications for steels for rolling stock, and other uses, but as most of the steels used previously were in accordance with British Standards, the resulting standardisation will not be so spectacular as in the case of some non-ferrous metals. Most grey cast iron mixtures already include a high percentage of returned scrap (sometimes up to 95 per cent.). Further economies, Mr. Dinsdale states, are not expected to be great.

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

Suburban Services

November 14

SIR,—Mr. H. C. Casserley in his letter in your November 2 issue draws attention to the inadequacy of the outer-suburban services on the London Midland Region from Euston. He should be glad he does not reside at any of the places served by the former L.N.E.R. lines from Kings Cross. The service now offered is the poorest on record. The cuts introduced on October 29 have reduced the rush-hour services, closed the Alexandra Palace branch and caused the withdrawal of many of the trains which formed the regular-interval service introduced in September, 1950. Bad periods in the timetable are intervals of two hours on the Hertford North branch between 10.54 a.m. and 12.54 p.m., 8.54 p.m. and 10.54 p.m. and a two-hour service with a few exceptions all days on Sundays. Hatfield line passengers are even more unfortunate; there are no trains to New Barnet, Oakleigh Park, or New Southgate between 6.59 p.m. and 9.21 p.m. (Saturdays excepted).

It is regrettable that suburban passengers have had to bear the brunt of the cuts while the main line services remain unaltered. The prevailing conditions on the Kings Cross line will only drive more traffic to other routes. It is a pity because the pre-war L.N.E.R. local service was one of the best in the London area.

Yours truly,

B. PERREN

43, Greenway, Southgate, N.14

Train Lighting by Electricity

SIR,—In your November 16 issue you refer in The Scrap Heap to the first Pullman car to be lighted by electricity on the London Brighton & South Coast Railway seventy years ago this autumn. This experiment was so successful that the all-Pullman car train which was placed in service between Victoria and Brighton on December 5, 1881, was similarly lighted.

The lighting of the train was considered to be a great success and was much praised by the guests of the railway company who were taken to Brighton and back on an inaugural trip on December 1 in the all-Pullman car train before its use in general service. Contemporary accounts state that the current was supplied from 34 of Faure's accumulators stored in the guard's compartment of one of he cars. On this occasion the accumulators had been charged at the London depot of the Société de la Force et la Lumière in the Strand, but later on the railway company's electrical engineer, Mr. E. H. Houghton, put up for this purpose a small charging unit at Victoria Station where the accumulators continued to be charged until he invented his device for charging the batteries from a generator, belt driven from the axle of the car. The idea of lighting the train by electricity was due to Mr. J. P. Knight, General Manager of the L.B.S.C.R.

Yours faithfully,

REGINALD B. FELLOWS

The Railway Club,
Fetter Lane, London, E.C.

Hotels and Sleeping Car Shortcomings

November 16

SIR,—I went to the Station Hotel at Perth for a bath, a shave, and breakfast.

"It's five shillings for a bathroom now, sir," said the lassie behind the desk on behalf of the Hotels Executive. I paid my five shillings for a bathroom in which there was no light over the mirror so that shaving became a matter of faith and touch. I was able to excuse a lipstick-stained cigarette end on the floor as there was no ashtray.

On Thursday night I travelled south in a first-class sleeper. I dropped my collar stud and, in the course of looking for it, found under the bed a copy of Tuesday's issue of *The Times*, an empty cigarette carton and sufficient fluffy dust to provide a year's raw material for bacteriological research. Now that the charge for a sleeper is 36s., I suggest there is an incentive to get them swept once or twice a month.

These are symptoms, I suppose, of conditions that would make an old railwayman weep. The son-in-law of the late Mr. Barrie, the Superintendent at Perth, told me he was with him one day at Dundee West when the train made a rough start. Mr. Barrie jumped up, put his head through the window and shouted for the train to be stopped. This was done. "Now go and tell the driver to start it properly," he ordered. This was done, too!

A return to this firm, fair discipline is surely an essential step to our railways recovering their pride. There isn't an old railwayman who would not welcome it.

Yours faithfully,

GILBERT DALTON

18, Milverton Terrace,
Leamington Spa

THE SCRAP HEAP

"Up" Line

About 90 of the 870 stations on the Western Australian Government Railways system have names which end in "up," such as Manjinup and Coolup. The explanation is that the term "up" is an aboriginal word for water, and frequently occurs in place-names in the heavier rainfall areas in the south-west of Western Australia.

Brighter Travel

Each day on the Tube I am riveted to my seat by the glazed expressions opposite. To stimulate people's wits I suggest the overhead advertisements be interspersed with gay pictorial puzzles or sallies from the nation's jesters. For the serious minded there could be excerpts from "The Golden Treasury" or the classics.—*From a letter to "The Evening News."*

An Awkward Load

When the Indian railway staff (all Moslems) proved unco-operative about moving Muriel, the former pet pig of the 1st Battalion of the Royal Inniskilling Fusiliers, by train, the battalion loaded her in a camouflaged crate, sent a large party of men to sing and shout to drown her squeals as she was loaded, and she was officially listed as "A. Co's stores."—*From the "Belfast News Letter."*

Regions or Railways

Names should be given to each distinct route of British Railways. London Transport have preserved the original names of the various lines in their system, and very helpful they are to the traveller in London. There is good reason to think that the readoption of such names as Great Eastern Railway, Great Central Railway, and so on, could be of great help to the main-line traveller.

I made this suggestion recently to the Railway Executive. They thought that "it would only tend to cause confusion in the mind of the travelling public." Is the London public so much brighter than the rest, or can it be that the Railway Executive are wrong?—*From a letter to "The Times."*

One-Track Mind?

The loaded draught of the British Railways ferry steamers at present in service across the Humber between Hull and New Holland (Lincs.) is 4 ft. 8½ in. Those of the vessels they replaced were the same, except the *ss. Cleethorpes*, which was 5 ft. 6 in. draught.—*From the "Hull Daily Mail."*

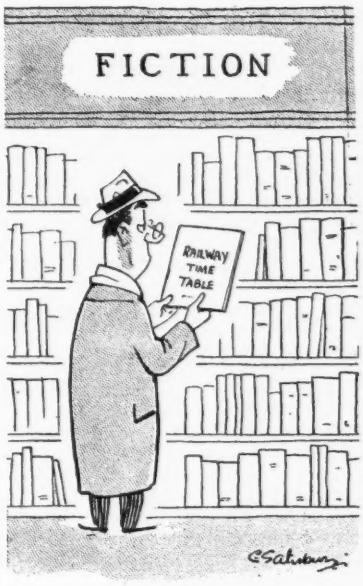
An Early Railway Mission

A correspondent writes that the Leper Chapel which stands on the Newmarket Road, Cambridge, and has just been handed over to the Cambridge Preservation Society by the University, has not only a long history but also an interesting connection with railway construction. It was built before 1170 and used for many purposes including a famous fair in its yard from 1211. In 1844 the University made it available to "the committee for providing religious instruction for the labourers building the Eastern Counties Railway and for the celebration of divine worship."

Lionised

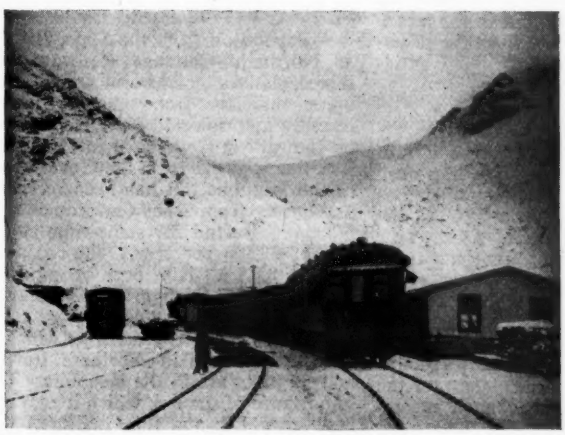
Mr. A. Dalton, General Manager, East African Railways & Harbours, has sent us the text of a telegram addressed by the stationmaster at Manyani (between Tsavo and Voi on the Kenya-Uganda main line) to the District Traffic Superintendent, Mombasa. It runs: "I cannot lower signal for 2A Down in section due to lion near station office. Thunderflash exploded and aggravated its anger."

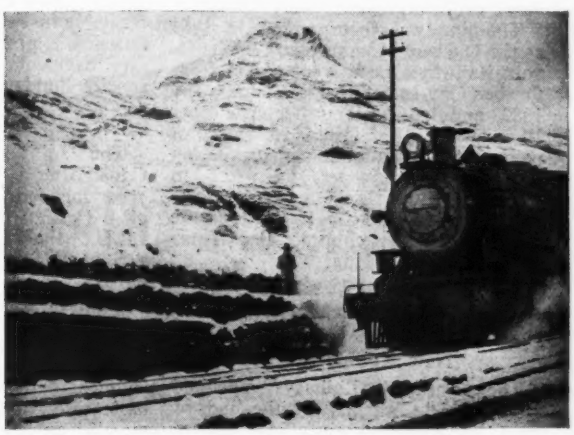
Another telegram we received recently, writes Mr. Dalton, was from an African stationmaster reporting the disappearance of an African woman from a third class coach while the train was in motion. It gave the cause of the accident as "husband states woman's anxiety to view the land."



[Reproduced by permission of the proprietors of "Punch"

Summer Scenes on an Andean Railway





Midsummer at Galera, Central Railway of Peru, 15,682 ft. above sea level in the Andes and one of the highest points reached by a railway. In the left-hand picture is seen the western portal of Galera Tunnel, and in that on the right Mount Meiggs (over 20,000 ft.) rises in the background

Photos] [Sir Donald J. McMullen

OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

RHODESIA

C.T.C. System Inaugurated

On September 28, Sir Godfrey Huggins, Prime Minister of Southern Rhodesia, inaugurated the C.T.C. system between Heany Junction and Shangani on the Bulawayo-Salisbury line. Those present at the ceremony included: Mr. G. A. Davenport, Minister of Mines & Transport; Sir Clarence Bird, Chairman, Railway Board; and Sir Arthur Griffin, General Manager, Rhodesia Railways.

The present method of train working in general use is the telegraph order system which can give rise to delays at crossing points. C.T.C. reduces these delays by controlling train movements by signal indication under the direct control of an operator situated at a convenient traffic centre. The section so far equipped is 50 miles long; work on extending it another 20 miles to Somabula is in progress.

The makers of the equipment are the Siemens & General Electric Railway Signal Co. Ltd. which has specially prepared the system to meet the requirements of the railway, whose Signal & Telegraph branch has carried out the erection and fitting.

CANADA

Quebec Railway Taken Over

The Canadian National Railways have taken over the 26-mile Montmorency division of the Quebec Railway, Light & Power Company running from Quebec City east to St. Joachim on the north shore of the St. Lawrence River and connecting with the C.N.R. line from St. Joachim to Nairns Falls. The C.N.R. now has a north shore line running 92 miles from Quebec to Nairns Falls *via* Montmorency Falls, Ste. Anne de Beaupré, and Murray Bay.

The line was incorporated in 1881 as the Quebec, Montmorency & Charlevoix Railway. It was completed from Quebec City to Ste. Anne, 21 miles, by 1889, and to Cap Tourmente, another 10 miles, by 1894. In 1895 the company received Dominion incorporation and in 1899 changed its name to Quebec Railway, Light & Power Company. In 1947 the C.N.R. acquired the part from St. Joachim to Cap Tourmente, five miles long.

MEXICO

New Rolling Stock

The National Railways operated 31,800 freight wagons by the end of June, according to an official report. These included wagons owned, rented from American sources, under repair, and privately owned.

The number of freight wagons in service was 24,200: 9,000 owned, 6,600 private, and 8,600 rented from the U.S.A. It is hoped to add to the freight total with new equipment from the U.S.A., release of vehicles used as living quarters by road workers, and stock being repaired.

Early next year, the National Railways will begin to receive passenger coaches ordered from European firms, chiefly France and Switzerland. The Schindler Wagon A.G. of Switzerland is constructing 27 dining cars, first-class observation cars and Pullmans, which will run on *de luxe* expresses between Mexico City and San Antonio, Texas, and 30 first-class coaches which, in conjunction with 50 acquired from Entreprises Charentaises of France, will effectively improve existing service.

IRELAND

Assistance for G.N.R.(I.)

The Northern Ireland Minister of Commerce announced in the House of Commons in Belfast last week that it would probably be necessary to pay upwards of £300,000 to the Great Northern Railway (Ireland) from public funds before March 31 next. He said no money had yet been paid out of public funds to the company, but from their knowledge of the company's financial position it was clear that it would be necessary, almost at once, to assist it to enable it to continue the necessary public services and to maintain employment.

Although no accurate forecast could be made at this stage of the amount of assistance that would have to be provided from Northern Ireland sources, it was not unlikely that a sum of more than £300,000 might become payable. The Minister announced that he would present a supplementary estimate, probably in February, but in the meantime it was proposed to meet the necessary payments from the Civil Contingencies Fund.

Recommendations on Wage Claims

The Joint Industrial Council of C.I.E., after a private session last week recommended the following increases on the claims made by the N.U.R., the I.R.U., the I.T.G.W.U. and the A.S.L.E.F. for pay increases: male employees, 8s. a week on basic rates; females, 6s. a week on basic rates, and 4s. a week for juniors.

The increases are to date from October 1, 1951, and the retrospective payments are to be calculated on the basic rates only. The council recommended an increase of £21 a year for rail operative supervisors, also retrospective to October 1, and calculated on basic rates.

About 7,200 workers will benefit by the recommendations. In some grades the demand was for an additional 15s. a week, with a minimum wage of £5, in others for a rise of 22s. a week. Engine drivers, firemen, and cleaners asked for a rise of 10 per cent.

Turf-Burning Locomotives

At a meeting of Galway Chamber of Commerce Mr. T. C. Courtney, Chairman of Coras Iompair Eireann, said that the initial results of the development of a turf-burning locomotive at Inchicore had proved satisfactory. If further tests were successful, a number of these engines would be built. This would mean that railway transport could be maintained in the event of an emergency.

Mr. Courtney also referred to the new diesel railcars on which the company was spending £1,000,000. The first was due for immediate delivery, and delivery of one per week was expected after that.

Increased Charges

On the subject of the latest wage increase of £680,000 and the increased cost of coal, Mr. Courtney said that increasing freight rates by 16⅔ per cent. and passenger fares by 12½ per cent. had brought in £1,200,000, which only met the old loss and left nothing to meet the new costs. It was estimated that if C.I.E. had increased the charges by 33 per cent. it would receive only 10 per cent. extra in earnings, because of the falling off in the traffic. Mr. Courtney mentioned the increase of private cars and lorries in the Republic, and the number of licensed hauliers which had risen to 5,000. Internal traffic, he said, had increased by 60 per cent. and imports by 35 per cent., but the increase in goods carried by C.I.E. had increased only by 9 per cent.

Sligo, Leitrim & N.C. Railway

A deputation from the Sligo, Leitrim & Northern Counties Railway with representatives of businessmen and union officials from the north-west recently met officers of the Department of Industry & Commerce in Dublin to seek financial aid from the Government of the Republic. It has been receiving assistance from the Government of Northern Ireland for some time at the rate of £1,500 per year. The company states that it has been compelled, because of the high costs of working, to seek outside assistance.

Some 12½ miles of the line, which is broad gauge, are in Northern Ireland and 50 miles are in the Republic. The importance of the link which it provides between C.I.E. and the G.N.R.(I.) was stressed at the meeting. The line runs westward from Enniskillen in Northern Ireland to Sligo in the Republic, and is almost the last of the smaller railways

operating in Ireland under private enterprise. It employs 150 men and showed a deficit of £5,000 last year. The result of the discussions was not made known.

Dundalk, Newry & Greenore Staff

The future employment of staffs affected by the closing of the Dundalk, Newry & Greenore Railway on December 31, has been discussed at a meeting between union officials and the G.N.R.(I.) in Dublin. After the meeting it was announced that most of the staff of 99 would be transferred to the Dublin (North Wall) section of the London Midland Region of the Railway Executive; some would be compensated for loss of employment and a small number, for whom no employment could be found, would be discharged.

HUNGARY

Demands of Five-Year Plan

The five-year economic plan of the Hungarian Government is making heavy demands on the State Railways. By 1954, freight and passenger traffic are to be more than twice the 1949 figure.

As a few additional resources for dealing with increased traffic are available, whether rolling stock, road vehicles, or staff, the burden is mainly on existing staff. Longer hours are being worked, enginemen are having longer periods away from home, with longer runs at higher speeds, and locomotive maintenance is suffering. Attempts have been made to train women for footplate, signalling, and other operating duties.

NETHERLANDS

New Electric Stock

To make up the deficiencies caused by the war the railways ordered in 1948 streamline electric sets totalling 65 four-car and 79 two-car units, with 13 trailers. So far, 62 of the four-car and 27 of the two-car sets, and all the trailers, have been delivered. The trailers have been used to build up 13 sets of three-car trains out of some of the older two-car formations. It is expected that all the remaining sets will be in service by August, 1952.

The number of electric locomotives is being considerably increased; 43 of 95 on order are now in service. Ten are of Swiss pattern—three supplied complete by Maschinenfabrik Oerlikon and the Swiss Locomotive & Machine Works, and seven built in the Netherlands under licence (see our September 7 issue). Of fifty Bo-Bo mixed-traffic locomotives under construction by Als-Thom, Belfort, 17 have been delivered. The first of 25 Co-Co locomotives of American design, being built under licence at the Heemaf N.V. works, should be in service shortly.

In 1949, 40 third class and 20 second class coaches, and ten combined luggage and restaurant vehicles were ordered from Beijnes and Werkspoor; all have been in service since May, running principally in expresses between the provinces of Holland, Groningen and Leeuwarden; Amsterdam, Rotterdam and Maastricht; and Zwolle and Roermond.

EASTERN GERMANY

Sleeping Car Services

The first sleeping-car service available to the general public since the war within the Russian Zone is reported to have started recently between Schwerin and Leipzig, operated by the State Railways. There are in addition various sleeping-car services to and from Berlin worked on behalf of the occupying powers and restricted to their personnel.

Publications Received

The "Railways" Calendar for 1952. Obtainable from Railway World Limited, 245, Cricklewood Broadway, London, N.W.2. Price 2s. 6d.—This useful calendar contains half-tone illustrations for each month measuring 7½ in. × 5½ in., and printed in dark green. They depict a wide variety of railway scenes in Great Britain and Ireland.

Studies in the History of Swindon. By L. V. Grinsell, H. B. Wells, H. S. Tallamy and John Betjeman. Swindon Borough Council. 8¼ in. × 5¼ in. 204 pp. Illustrated. Price 10s. 6d. net.—The golden jubilee of the amalgamation in November, 1900, of Old Swindon, a small market town with a history traceable back to the Bronze Age, and New Swindon, then only sixty years old and a product of the Railway Age, has been commemorated in book form by the Swindon Borough Council. The work comprises five long essays, with an introduction. Railway students will turn particularly to the last two essays, "Swindon in the Nineteenth and Twentieth Centuries," by Mr. H. B. Wells, and "Architecture," by Mr. John Betjeman; the first of these is concerned largely with the rise of New Swindon and is full of interesting details of the close connection between New Swindon and its creator, the Great Western Railway, which, in 1841, decided to provide there an "engine establishment" which "would also comprehend the large repairing shops for the locomotive department." Mr. Betjeman analyses Swindon building styles, bringing out the "class distinction" evident in the types of railway houses. The book is well documented and the photographs and drawings are excellent.

Bon Voyage!—The illustrated handbook of French National Railways passenger facilities during the current winter deals with matters such as currency and Customs regulations, reduced fare facilities, reservations in trains and steamers, and French Railways motor-coach tours. Photographic illustrations include Pullman and *couchette* accommodation and new cross-Channel vessels, and a map gives kilometric distances between principal stations. The handbook is obtainable from French Railways Limited, 179, Piccadilly, London, W.1.

Ninety Years of Rolling Stock Building for Home and Overseas.—To commemorate Festival year the Gloucester Railway Carriage & Wagon Co. Ltd. has produced a booklet outlining the development of the company since it began operations in 1860 on a capital of £100,000, and with a staff of 120 men. Its first overseas order came from Argentina; subsequently it has built all types of rolling stock for numerous railways abroad, as well as for British railways. An illustrated selection of its products for home and abroad gives a good idea of their diversity. They include inspection and saloon coaches, tube railway stock, sleeping cars, railcars, brakevans, hopper wagons, parcel vans, and many other types. The firm, which repairs as well as builds wagons, has for the fourth successive year surpassed all previous records in output. It has been said: "If it runs on rails, the Gloucester craftsman can design and build it;" the tradition of craftsmanship remains strong within the company, contributing to a harmonious relationship between management and staff.

German Federal Railways Freight Advertising.—The Federal Railways campaign for freight traffic now in progress in Western Germany includes folders illustrated in colour and photogravure of freight handling methods, including wagon transporters for various kinds of traffic, road trailers, railborne skips, and containers, also methods of dealing with "smalls" and express parcels.

Noral Alloy Castings and Forgings.—A brief account of a scheme of modernisation carried out at the Handsworth works of the Northern Aluminium Co. Ltd. is included in a new brochure, the main part of which describes and illustrates the way in which Noral castings and forgings are fabricated. Mention is made of their increasing use in almost every field of industry, where they are replacing older materials, and also included is information on design and properties illustrated by examples of various components.

Winter Sports 1951-52.—A feature of the current winter sports programme of Thos. Cook & Son Ltd., is the inclusion of many new centres in Austria, Bavaria, Italy, Norway, Sweden, and Spain. The French resorts are mainly in the Alps, though some are included in the Pyrenees and the Maritime Alps behind the Riviera.

Modernised Marshalling Yard at Toton—2*

Signalling of movements over hump, and operations conducted from the hump room

ONE of the problems often associated with hump marshalling yards is the inadequacy of control over speed of propulsion over the hump and other movements on the arrival lines, and in the case of the former Toton Up yard there was only one humping signal of the semaphore type, and this was common to all the arrival lines. In designing the new Up yard, it was decided to provide an unmistakable continuous indication to drivers of humping engines of what they are required to do, from whatever position they may be on the arrival lines, and also an indication to drivers of incoming trains where they should bring their engines to a stand.

This was the main consideration in having the arrival lines without any curvature in the plain track, following on a decision to instal position-light signals for humping control and colour-light signals for incoming train engines but, to keep down to a minimum the number of signal posts required, opportunity was taken to make the spaces between alternate arrival lines slightly wider than standard, and to provide a unique, yet simple, system of applicability indication for humping operations. In Fig. 6 is shown in diagrammatic form the layout of the arrival lines and illustrations of the signals provided.

In the case of incoming trains, when a driver has passed the signal giving permission to enter off the Up goods line, he does not know on to which arrival line he will run, and there is no further signal applying to him until his engine reaches the hump end of the arrival line. At yards where no signal, or other indication, is provided, the onus is on him to bring the engine to a stand clear of connections, but so as to leave the converging point area leading to the hump free of obstructions to visibility of hump-engine drivers, and to avoid possibility of confusion with humping signals, a short-range red colour-light signal is provided on the last row nearest the hump for each arrival line. These are fixed on bracket arms to the posts carrying the humping signals—one post in each wide gangway carrying a bracket arm on either side, and the signals are continuously illuminated, except when taken off to liberate the train engine, or when a humping operation off the same line is in progress.

When the train engine is uncoupled and the line over the hump clear for the locomotive to be liberated, the appropriate red signal is extinguished by operating a switch in the hump room and a green light on the same bracket arm displayed. This is an indication to the driver to move his engine to the hump for disposal instructions, which take the form of a verbal order to proceed onwards *via* a "train engine release" line, entered by a facing connection in the humping line immediately on the yard side of the hump, and so on to the motive power depot, or to such other duties as booked, or required.

In respect of humping movements, it will be seen from the diagram already mentioned that there are three rows of signals in alignment across the arrival lines, in the wide gangway spaces. Each post carries lunar-white position-light signals capable of displaying one or other of the following aspects:—

Three vertical ...	Hump at normal speed	0 0 0
Three oblique ...	Hump slow	0 0 0 or 0 0 0
Three horizontal	Stop	0 0 0

When not in use, the position-light signals are not illuminated.

The first two rows from the entrance end are double-sided, so that when a hump-engine driver has passed one row, and if visibility is such that he cannot

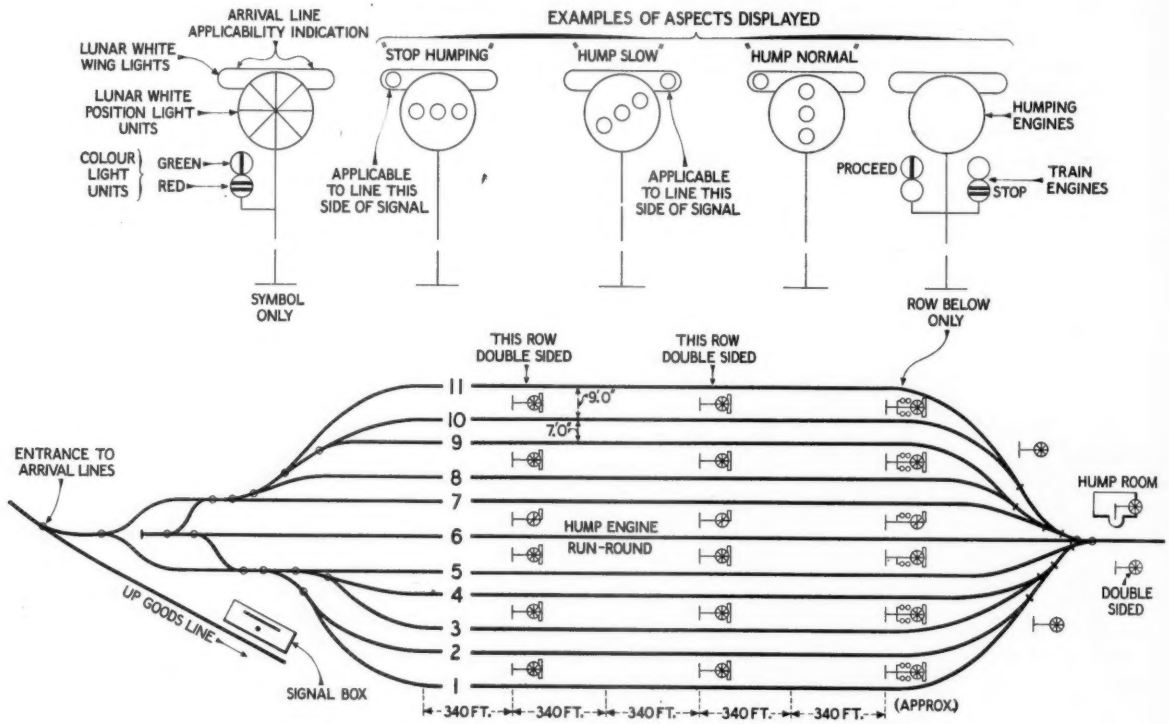


Fig. 6—Diagrammatic sketch showing arrangement of arrival lines

* Part 1 of this article appeared in our issue of November 16

read the next ahead, he can see the one in rear by looking back until he is half way between the two rows, when he will be in a position to see the one ahead. Longitudinally, therefore, the number of posts and the amount of cabling and troughing is reduced to a minimum.

Laterally, a number of posts were avoided by installing them only in the wider gangways, as previously mentioned, but so as to distinguish the adjacent arrival line to which the humping aspect displayed is intended to apply, an applicability indication light is incorporated, one on either side of the upper part of the signal face. This is a similar type lunar-white light to the humping aspects and operates in unison therewith, so that whichever applicability light is illuminated, it is an indication to the driver of the humping engine that the humping aspect displayed applies only to the arrival line at that side of the humping signal.

Between the last row and the hump, there are four position-light signals, which are automatically displayed in unison with the aspect exhibited on the particular arrival line off which a humping movement is taking place. These are positioned to assist a driver, who, after passing the last row, may be unsighted in certain positions due to high-side vehicles immediately in front of him, or when wagons are passing over curves approaching the hump. Three are single sided, but one at the apex of the hump is double-sided, so that it can be seen by men working on the yard side of the hump and from the control tower.

Position-light signals of the same type as on the arrival lines are provided for the hump engine run-round road also, for use when re-shunting has to take place after a drawback movement from the yard. In the latter case the "stop" aspect of the signals applying to No. 6 run-round is used to give an indication to the driver that the last vehicle has been drawn back clear of the hump.

The instructions laid down are that the position-light signals on the arrival lines are only to be observed by drivers of engines on humping operations.*

Disposal of Trains

As soon as trains come to a stand on the arrival lines, the wagons are inspected by examiners to see if there are any defects requiring attention, in which event they are suitably labelled. A head shunter follows and, after reading the destination as shown on the label on all loaded wagons, he chalks on the leading end on the hump room side, the number of the sorting siding for which that particular destination is allocated. Either while the train is standing, or as it is being propelled towards the hump, another shunter uncouples between the cuts, using a shunting pole.

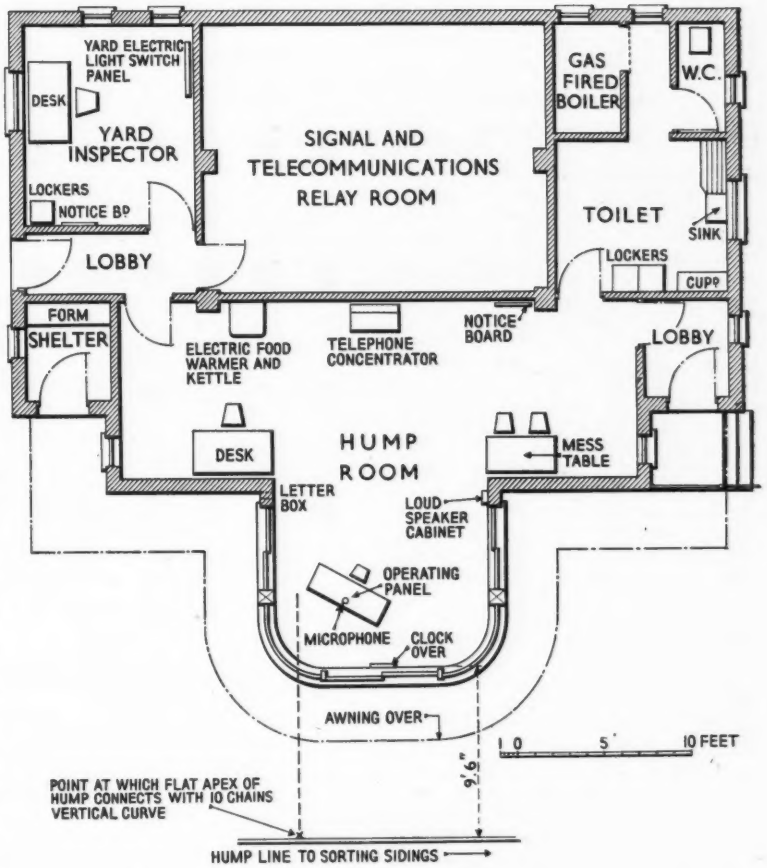


Fig. 7—Plan of hump room building

The hump room building is a single-storey structure at the apex of the hump, close to, and on the eastern side of the single humping line; a plan of the layout is given in Fig. 7. The building is a brick structure, with flat reinforced concrete roof, and comprises an operating room, a yard inspector's office, electrical relay, etc., room, toilet facilities, and a compartment housing a gas-fired boiler, which provides heating by radiators in all rooms and is thermostatically controlled.

From the operating room, generally referred to as the hump room, the following duties are carried out:—

Liberation of train engines
Control of humping operations
Routing of cuts into the sorting sidings
Transmitting cut data to control tower
Recording shunting performance
Movements involving liaison with other parts of the yard

A head shunter operates a specially designed panel, situated obliquely to the humping line, in an amply glazed bay, and from it he sets up the routes for the cuts of wagons into the 37 sorting sidings.

Under a tele-typewriter system for transmitting cut data to the rail-brake operator, which is described later, and was first used when mechanisation was introduced at the Down yard in 1939, cut lists are not prepared in advance, while a train is standing on the arrival lines. As a result, the position of the panel and its operator in relation to the humping line and hump apex, is of paramount importance. The operator must be able to see clearly the siding number, which has been chalked on the end of the wagon, and he must also be able to detect the separation between cuts before a cut leaves the apex on its descent down the steeper falling gradient towards the sorting sidings.

The most favourable position for the operator was plotted to ensure the best visibility, and after allowing for the size of the panel and cabinet carrying it, and the best operating position, the operating room and the building generally was, in a sense, designed round that position. As in the case of signalmen, the operators take their meals in the same room in which they work, all necessary facilities being provided for water boiling, food warming, seating, and on

The panel operator also keeps an eye on any exceptional features which may occur, both approaching towards and descending from the hump, and so regulates propelling movements that cuts are adequately spaced, by manipulating the humping signals. A microphone mounted on the panel allows him to

* On the single line diagram of the yard layout, shown in Fig. 4, the outermost of the Old Bank group of flat sidings (No. 13) is shown connected to the south end of No. 1 arrival line. This is a development subsequently decided on, primarily to enable certain occasional yard movements to "by-pass" the hump and when completed will be protected by suitable signalling, without destroying the use of No. 1 as an Up arrival line, when not occupied with other movements

convey any special intimations necessary during humping to the control tower lower down the yard.

Hump Room Panel

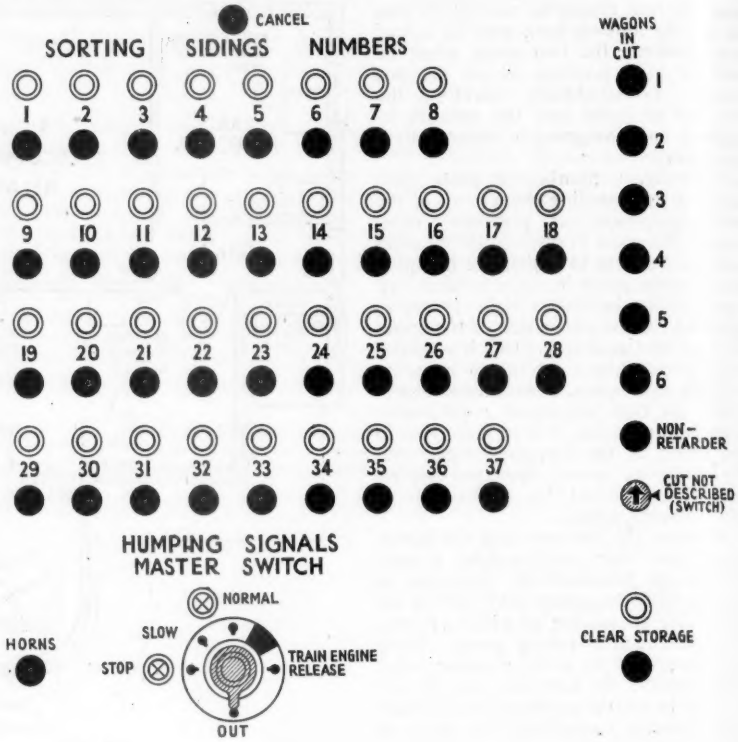
The layout of the operating panel in the hump room is shown in Fig. 8, with brief explanatory notes. On the extreme right is the "arrival line occupation" section, as repeated in Stapleford & Sandiacre signalbox. It is not operated automatically by track circuit and is simply a visual indication to show which arrival lines are occupied and which are "clear." From this room they can be "cleared," or "blocked," by depressing the appropriate buttons; from the signalbox end they can only be "blocked."

Next adjacent on the panel, reading from right to left, is a diagram showing the hump end of the arrival lines with signalling and other indications as described in the key. The extreme left of the panel carries the bank of 37 push-buttons—one for each sorting siding—and, adjacent, a row of buttons to indicate "number of wagons in cut," up to six.

In the lower left half of the panel is a master switch for operating the humping signals and those for liberating train engines. This master switch functions in conjunction with the small bank of arrival line buttons shown, numbered 1 to 5, and 7 to 11, and the run-round road No. 6. Other subsidiary switches and buttons are shown, but the above constitute the main features.

The method of operation is as follows. The panel operator having satisfied himself, by enquiry over the loudspeaker giving communication with the control tower, that a humping operation may commence (assuming the train engine has already been liberated and having turned the two sets of power worked points on the approach side of the hump to the correct trailing position), turns the master switch to the "Hump normal" position, but the aspect is only displayed in the signals on the particular arrival line and in the indication lights on the panel when he has depressed the appropriate numbered arrival line button. A similar course is followed when a train engine is ready to be liberated, by turning the master switch to "Train engine release." There is, however, a buffer between "Train engine release" and "Hump normal" which prevents the master switch being turned inadvertently direct from one position to the other.

As the leading wagons of a shunt approach the hump (the apex of which is approximately opposite to the panel), the panel operator observes through the bay window the chalked siding number on the leading end and depresses the appropriate siding button—releasing the button as soon as the corresponding indicating light appears on the panel. He then observes how many vehicles there are in that cut and depresses the appropriate "wagons in cut" button. As soon as an automatic bell ring is received, the siding light previously mentioned becomes extinguished and he may then, but not before, proceed to repeat the process similarly for the succeeding cut.



KEY TO PANEL (LEFT SIDE)

- PUSH BUTTONS
- HUMPING SIGNAL INDICATION — ILLUMINATED (BY WHITE LIGHT) ACCORDING TO ASPECT OF HUMPING SIGNAL DISPLAYED, PROVING SIGNALS H.1, H.2, H.3, & H.4 ONLY
- ROUTE INDICATION — ILLUMINATED (BY WHITE LIGHT) WHEN CORRESPONDING BUTTON DEPRESSED. BUTTON KEPT DEPRESSED UNTIL LIGHT APPEARS. LIGHT AUTOMATICALLY EXTINGUISHED WHEN CUT DESCRIBED
- ROTARY SWITCH — OPERATES HUMPING OR TRAIN ENGINE RELEASE SIGNALS, IN CONJUNCTION WITH ARRIVAL LINE SIGNAL SELECTOR BUTTONS

Fig. 8—Diagram of operating panel in hump room, left side

The action described combines two functions, as under:—

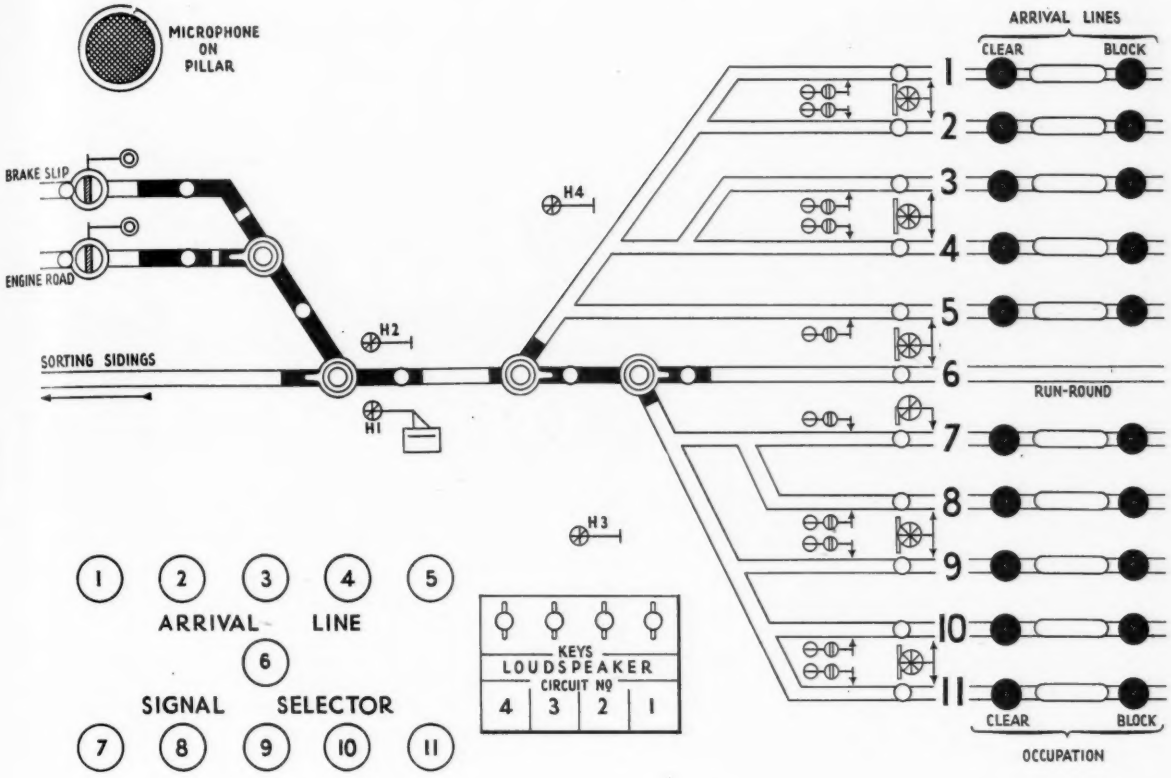
(*a*) Pre-sets or stores by a system of electrical relays the route to be taken into the sorting sidings by each cut in succession

(*b*) Causes the number of the siding and wagons in cut to be printed in type on a moving paper band in front of the operators in the control tower

In connection with the first of these functions, the track from the hump apex to a short distance inside clear, in each of the 37 sorting sidings, is divided into a number of track circuits by insulated rail joints. The action described causes the power-operated points to move where necessary, in readiness for the approaching cut, provided the preceding cut has gone clear of the track circuit which holds those points until the wheels of that preceding cut have left that circuit.

The system provides for storing at least as many route directions, as the number of consecutive cuts likely to be on the move on the track circuited area from the hump to the sorting sidings at one and the same time. The points can be operated individually when occasion requires, from the control tower already mentioned.

The operators mentioned in the second function include the shunter operating the railbrakes and the man responsible for taking diversionary action with any cuts overtaking one another prematurely, for which he is provided with an illu-



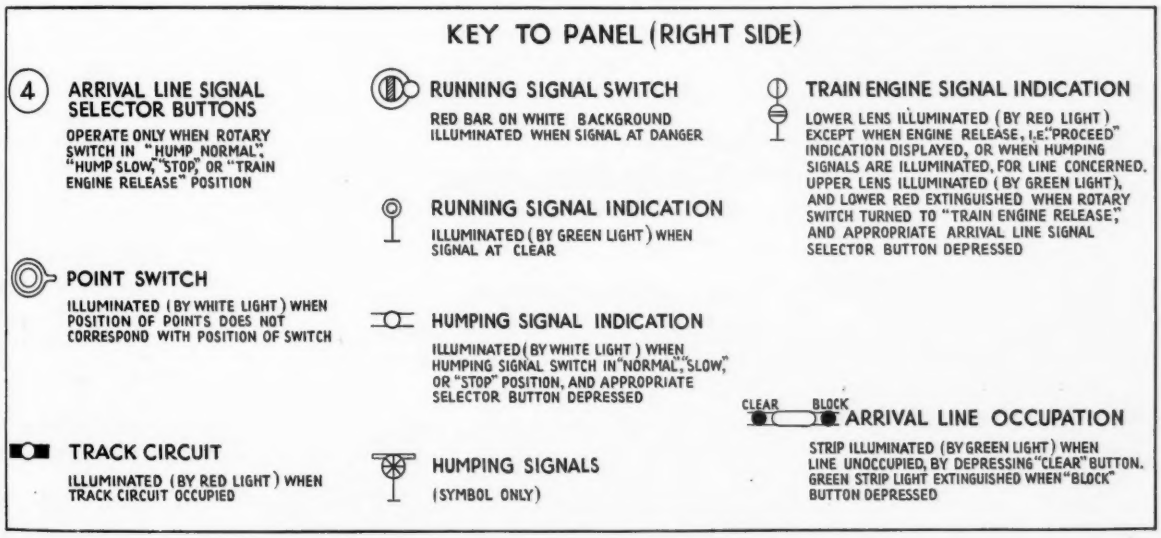

KEY TO PANEL (RIGHT SIDE)
4 ARRIVAL LINE SIGNAL SELECTOR BUTTONS
OPERATE ONLY WHEN ROTARY SWITCH IN "HUMP NORMAL", "HUMP SLOW," "STOP," OR "TRAIN ENGINE RELEASE" POSITION
RUNNING SIGNAL SWITCH
RED BAR ON WHITE BACKGROUND ILLUMINATED WHEN SIGNAL AT DANGER
TRAIN ENGINE SIGNAL INDICATION
LOWER LENS ILLUMINATED (BY RED LIGHT) EXCEPT WHEN ENGINE RELEASE, I.E. "PROCEED" INDICATION DISPLAYED, OR WHEN HUMPING SIGNALS ARE ILLUMINATED, FOR LINE CONCERNED. UPPER LENS ILLUMINATED (BY GREEN LIGHT), AND LOWER RED EXTINGUISHED WHEN ROTARY SWITCH TURNED TO "TRAIN ENGINE RELEASE," AND APPROPRIATE ARRIVAL LINE SIGNAL SELECTOR BUTTON DEPRESSED
RUNNING SIGNAL INDICATION
ILLUMINATED (BY GREEN LIGHT) WHEN SIGNAL AT CLEAR
POINT SWITCH
ILLUMINATED (BY WHITE LIGHT) WHEN POSITION OF POINTS DOES NOT CORRESPOND WITH POSITION OF SWITCH
HUMPING SIGNAL INDICATION
ILLUMINATED (BY WHITE LIGHT) WHEN HUMPING SIGNAL SWITCH IN "NORMAL," "SLOW," OR "STOP" POSITION, AND APPROPRIATE SELECTOR BUTTON DEPRESSED
CLEAR
BLOCK
ARRIVAL LINE OCCUPATION
STRIP ILLUMINATED (BY GREEN LIGHT) WHEN LINE UNOCCUPIED, BY DEPRESSING "CLEAR" BUTTON. GREEN STRIP LIGHT EXTINGUISHED WHEN "BLOCK" BUTTON DEPRESSED
TRACK CIRCUIT
ILLUMINATED (BY RED LIGHT) WHEN TRACK CIRCUIT OCCUPIED
HUMPING SIGNALS
(SYMBOL ONLY)

Fig. 8—Diagram of operating panel in hump room, right side

minated diagram of the point area. These two men have before them a moving list showing the cuts in transit between the hump and the sorting sidings.

In practice, at the present time, the average number of wagons in each cut over the hump is between two and three. It will be noted that the panel in the hump room caters for cuts consisting of up to six wagons. If cuts exceed that number of vehicles the switch marked "Cut not described" is operated, which switches out cut buttons numbered one to six, and the actual number in the cut is counted from observation and transmitted by loudspeaker to the control tower.

An additional cut button marked "non-retarder" is provided for use when vehicles to which the railbrakes should not be applied pass over the hump. These comprise only a very small proportion of the total dealt with and include vehicles having abnormal type wheels, for example, any with tyres secured to wheel centres by protruding fastenings which are liable to be sheared if the railbrakes are applied, also some with wheels slightly in excess of standard width and too wide to pass between

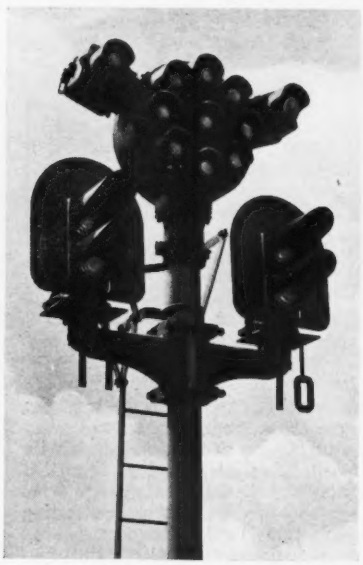
Approach to hump from arrival lines, showing signals in foreground, hump room building to left, and block accommodating shunters, wagon examiners, and platelayers to right of hump

the railbrake beams when in the operative position. Wagons conveying traffic of a particularly exceptional character are treated as "non-retarders," hand braking being resorted to as necessary.

A button is provided for cancelling all cuts remaining in the electrical storage before resuming humping operations, should a mishap, or other special circumstances, arise necessitating a temporary dislocation of normal working. At the top of the panel is a "cancel" button, which permits the correction of an error in depressing one of the siding buttons, should one be inadvertently pressed due to difficulty in deciphering the chalked number on a wagon, or for any other reason. The button marked "horns" operates a series of "klaxon" horns on the arrival lines, but these are only used in emergency.

The microphone mounted on the panel allows rapid communication to be made to four "key" points by depressing one or other of the switches shown. These points are:—Stapleford & Sandiacre signalbox, from which entrance to

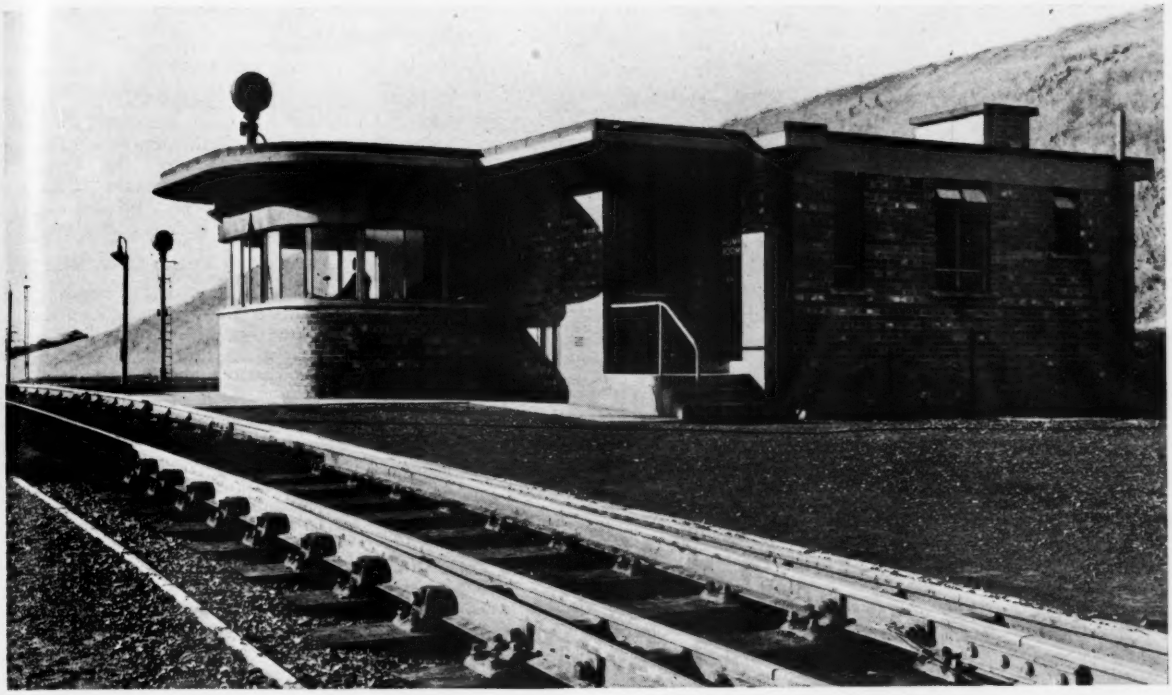
(*Continued on page* 577)



One of last row of hump signals with arms carrying train engine signals

Cabinet and operating panel in hump room, Toton Up yard, from which the routes for the cuts of wagons are set up

Modernised Marshalling Yard at Toton—2

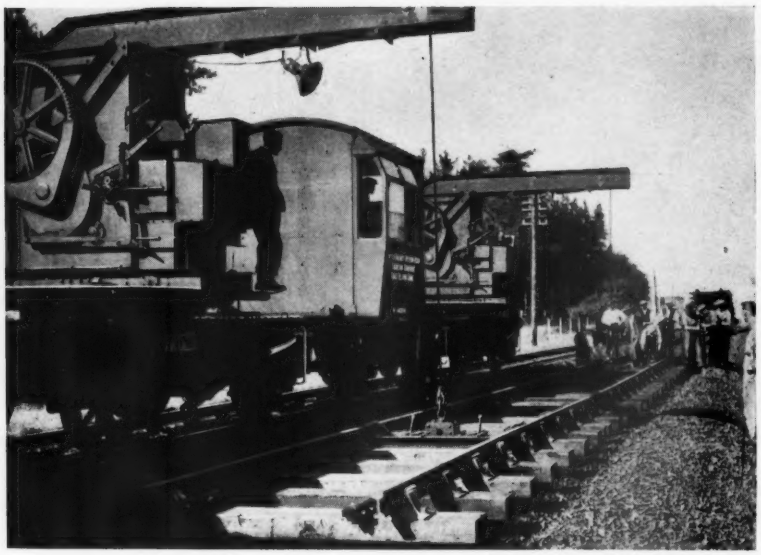


Hump room building as seen from descent from hump, Toton Up yard

View from interior of hump room, showing operator at work during humping operation

Mechanised Appliances for Permanent Way Maintenance—3*

A comparison of the manual and mechanical methods of track renewal



Western Region track-relaying crane at Bromfield

IN the renewal of track, two main methods are in general use. In the first, the whole operation is done manually; this is the traditional method used since the inception of railways. In recent years cranes have been used, either to remove the old material, or to lay in the complete new sections, the remainder of the work still being done manually.

The second main method in use requires the use of cranes both for removing the old material and for laying in the new. In describing these methods of track renewal it will be understood that in the case of flat-bottom track, which has become standard only in recent years, very little renewal has as yet had to be considered, and it is expected that renewals of this type of track will be by pre-assembled methods.

Rail Barrows

Taking the first method, the procedure for the renewal of bull-head rails is first to knock out the keys and fishplate bolts, and to remove the fishplates. The rails are then lifted out of the chairs and placed in the cess, or six-foot way, by means of a recent invention known as a rail barrow. This device consists of a lever to which is attached a rail grip, mounted on a wheel. Six men are required to lift a 60-ft. rail with barrows, whereas 24 men are normally needed when this is done manually.

The old sleepers are then either lifted to one side and stacked, or loaded direct into wagons. Before the new sleepers are laid, the ballast must be thoroughly loosened and levelled. This can be done either manually, or by an ordinary light rubber-tyred tractor, or one fitted with caterpillar tracks. A frame not unlike a harrow is attached to the tractor. This machine is fast superseding manual methods, particularly in areas where there is a manpower shortage.

The new material is now ready for laying. The sleepers with chairs, or baseplates, previously attached are placed in position; the new rails are lifted on to their seatings in the same way that the old ones were removed, and are secured by driving in either keys, or spikes, according to the type of rail; and the fishplates are fitted. The track is then gauged, roughly lined with pinch bars, and the sleepers packed. Additional supplies of ballast are discharged from the hopper wagons of the ballast train and the track is packed with this additional material, realigned, and levelled with cant, or superelevation where necessary.

The Matisa tamping machine can be used during this second packing of the sleepers. This machine consists of a self-propelling power-unit, which is mounted on and drives a four-wheeled trolley. It is accompanied by a trailer so designed that the machine can be removed completely from the track to enable traffic to pass. Under the machine are mounted eight pairs of heavy-duty tamping tools in two groups of four pairs each. These tamping tools are introduced into the space between the sleepers, and to a depth of about three in. below the bottom of the sleepers, and are vibrated rapidly. They close together, consolidating the ballast under the sleepers on either side of the rail seatings. Approximately ¼-mile of track can be packed in eight hr. by this machine. The track is then made tidy, the appropriate shoulder being given to the ballast at the ends of the sleepers on the cess side, and the old material loaded away.

Relaying by Power-Operated Plant

By way of contrast, some of the methods for relaying with power-operated plant may be described. These involve the use of a single crane, two cranes, or a special track-relaying unit, or crane. Such operations require the use of a second track, and cannot be performed on single lines. A material train with the requisite number of wagons, each loaded with five or six lengths of pre-assembled track, together with one or more empty wagons, is brought forward to the site. One length of old track is then picked up from the length to be repaid, loaded on an empty wagon, and a length of new track is placed in the gap thus formed. A 60-ft. length of pre-assembled track with wooden sleepers weighs between 4 and 5 tons.

If two cranes are used, one usually lifts out old lengths, while the other lays in the new track. This can be varied, depending on the number and type of cranes used, and on the method adopted for breaking and levelling the old sleeper beds. This applies particularly where the breaking up of the ballast bed is done by a mechanical scarifier.

Originally, the same travelling cranes were used for other engineering work, but a later development has been in the introduction of an 8½-ton tailless diesel-electric crane, primarily for relaying purposes. A tailless crane is an advantage in that it can clear platforms, and does not foul adjoining lines or other obstructions, such as stay wires and telegraph posts.

Track-relaying units have been developed as an alternative to ordinary travelling cranes. They consist of two horizontal cantilever crane jibs, which can be swung out by hand over the adjoining track. A grappling device, or bale, is fixed on the end of the hoisting gear of each jib for raising and lowering the length of pre-assembled track; the jibs can work independently or together. The relaying unit is moved by a small locomotive (preferably a diesel), along the adjoining track, and deals both with the loading of old lengths of track on to the empty wagons and the unloading of new track.

The materials train is arranged so that this can be done with a minimum of movement. These relaying units were first designed to facilitate relaying in tunnels where there is no room for an ordinary crane to operate, but they are now used for all types of pre-assembled renewal in the open. When

* Parts 1 and 2 of this article appeared in our issues of November 2 and 9

the pre-assembled lengths have been laid in by crane, or track relayer, the remainder of the work usually is carried out in the same way as for manual relaying.

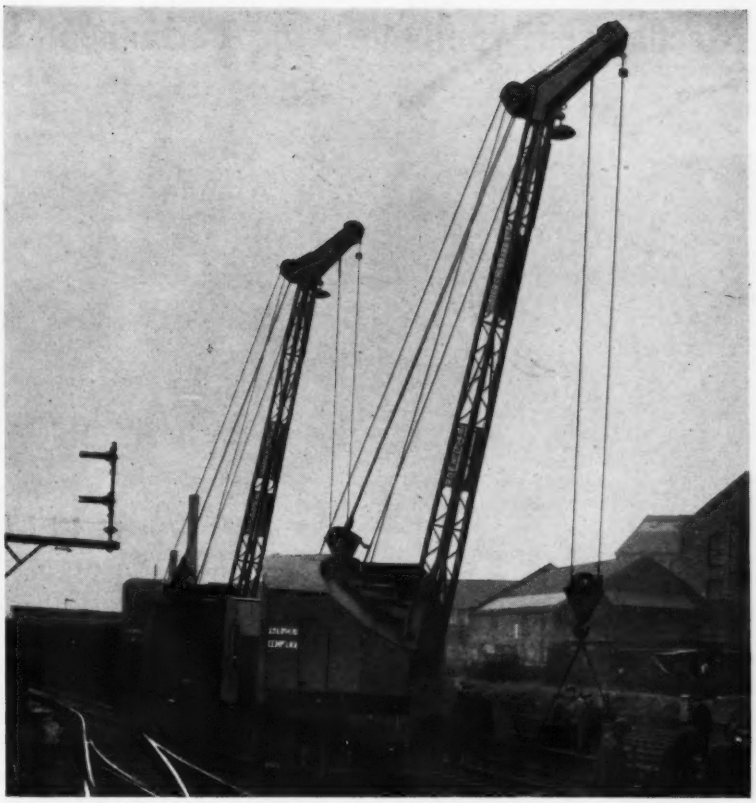
The use of cranes for pre-assembled renewals necessitates the assembly of the new materials at a depot and their conveyance by special train to the site. Similarly the old materials have to be conveyed to a depot for dismantling, or to another site for reuse.

Where the renewal of points and crossings is involved the procedure is somewhat different. The manufactured components of the points and crossings are sent to a depot, or to a site adjacent to the junction to be removed where the whole of the new track work, including sleepers and long timbers, is assembled to ensure that all the parts will fit correctly and to minimise the time required for relaying.

This pre-assembly of the new track enables all the parts to be marked and numbered, and the layout checked, after which it is dismantled into the largest practicable sections for loading and conveyance to the site. The renewal usually is carried out by cranes, but if the site conditions allow, the whole of the point and crossing work can be skidded, or slewed into position once the old materials have been removed. Although most designs for point and crossing layouts are in accordance with standards, each location usually has its peculiar limitations, and no standard method can be laid down for this type of renewal.

For several years there has been a serious shortage of suitable timber, and pre-stressed concrete sleepers have had to be used on many of the less important lines. Because of the considerably greater weight of concrete, as compared with timber, it has been found desirable to use mechanical equipment for unloading and spacing these sleepers although this has still to be done manually in many places. For this purpose, the sleepers are taken to the site on a train of flat end-door wagons, which also conveys two light mobile cranes, one at each end of the train. At the site, these cranes travel towards each other from wagon to wagon by means of a bridging piece between the wagons, unloading the sleepers at the side of the track. A special device is used, which allows the sleepers to be unloaded in groups of four. A ramp has also been developed to allow one of the cranes to be driven down on to the ground, from where it can place the concrete sleepers in position.

(*To be continued*)



Taylor & Hubbard Limited 8½-ton diesel-electric crane used by L.M.R. Civil Engineering Department for relaying and general purposes

Modernised Marshalling Yard at Toton

(*Concluded from page* 574)

the arrival lines is controlled; the area where the arrival lines converge towards the hump, for men engaged on chalking, uncoupling and examining wagons; Toton Centre signalbox, which attends to liberated train engines sent from the hump *via* the engine release slip; and the railbrake and panel operators in the control tower.

A duplicate microphone and four corresponding keys are provided at the rear interior of the hump room, which permits any of the loudspeaker circuits to be used by a second person, without distracting the attention of the panel operator during a humping operation. These duplicate loudspeaker keys are incorporated in a cabinet in which the necessary telephone circuits are concentrated. The interior electric illumination can be subdued as necessary to avoid reflections on the windows and assist in operating the panel during humping movements.

(*To be continued*)

EUROPEAN OIL EXPERTS VISIT U.S.A. AND SWEDEN.—Three groups of oil experts have left Europe to study American and Swedish methods in the industry. The missions have been arranged under the Technical Assistance Scheme of O.E.E.C. The United Kingdom is represented on two of the teams to the U.S.A. by Messrs. Douglas Wilson, United Steel Companies Limited, Vice-Chairman of the Council of British Manufacturers of Petroleum Equipment; Frank Kenyon, William Kenyon & Sons Ltd.; S. C. MacKenzie, Oil Well Engineering Co. Ltd.; and J. Steel, Ruston & Hornsby Limited.

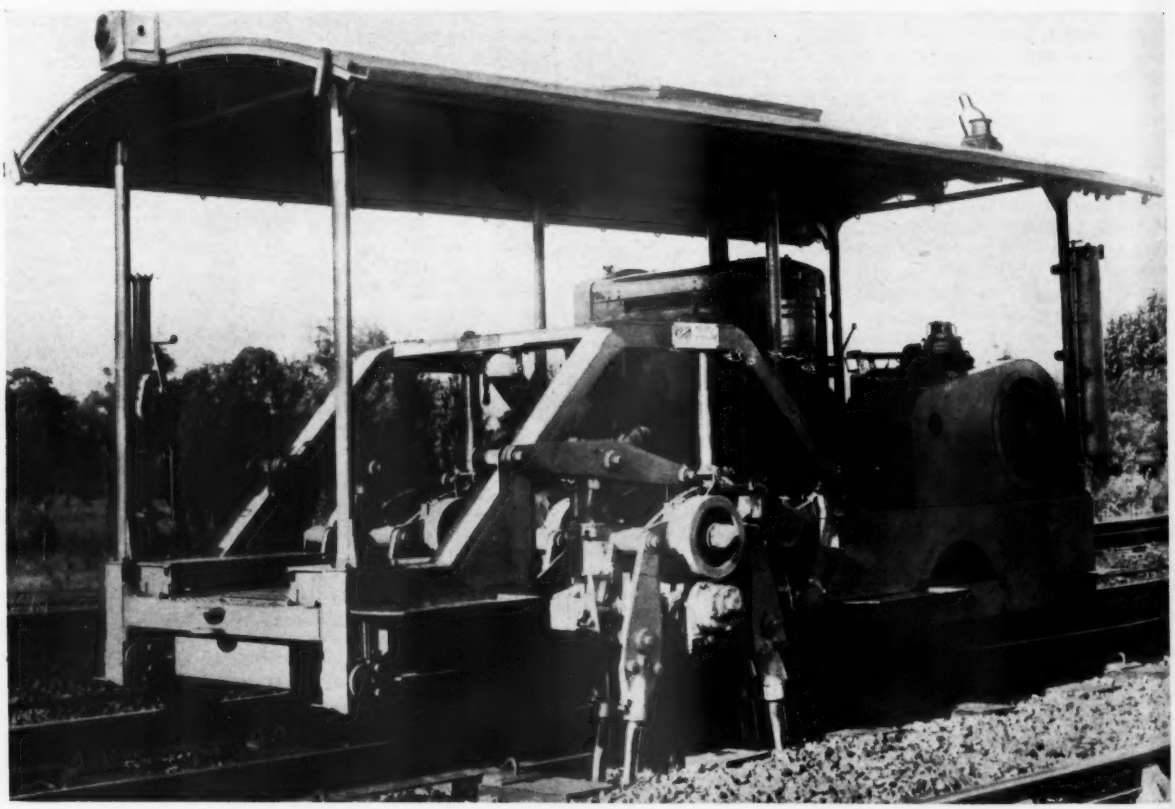
SEPTEMBER ROAD ACCIDENTS. — Road casualties in Great Britain during September totalled 18,810 and included 438 killed and 4,753 seriously injured. There was the usual seasonal decrease as compared with August, although the total was 450 more than that for the corresponding month last year. It was the highest figure for September since the war, and only about 800 less than for September, 1938.

ROAD TRAFFIC CENSUS.—The annual census taken by the Automobile Association on 22 roads over a period of seven days in September has shown an aggregate decrease of 1·03 per cent. in the number of motorcars.

COPPER AND ZINC RESTRICTIONS ORDER.—The Minister of Supply has made an Order extending the list of articles in which the use of copper, zinc, and their alloys is banned. The Order (Copper & Zinc Prohibited Uses (Ministry of Supply) (No. 2) Order, 1951, S.I. 1951, No. 1960) came into operation on November 20, and lists a number of goods, including equipment in passenger transport vehicles and air conditioning equipment. These additions to the range of prohibited manufactures result in the main from the agreement made by the various member countries of the O.E.E.C. and announced in Paris on September 25.

Mechanised Appliances for Permanent Way Maintenance—3

Laying flat-bottom rails on the Western Region with the Pannell rail-barrow supplied by Abtus Limited



Matisa Equipment Limited tamping machine for consolidation of ballast between sleepers

RAILWAY NEWS SECTION

PERSONAL

Mr. J. M. Rivero de Aguilar, Manager, Spanish National Railways, has been nominated as Under-Secretary of Public Works, and has been succeeded by Mr. J. M. Garcia-Lomas, Director General of Railways, Tramways & Road Transport, since 1945.

Mr. C. T. Roberts, Locomotive Works Manager, Swindon, Western Region, has been appointed Carriage & Wagon Engineer, Western Region.

Mr. J. S. Maclay, Minister of Transport & Minister of Civil Aviation, has appointed Mr. Harold A. Watkinson, M.P. for Woking, as his Parliamentary Private Secretary. Mr. Gurney Braithwaite, Parliamentary Secretary to the Ministry of Transport & Ministry of Civil Aviation, has appointed Mr. Raymond Gower, M.P. for Barry, as his Parliamentary Private Secretary, and Mr. P. E. Lazarus as his Private Secretary.

Mr. W. R. Mosby, Indoor Assistant to Signal & Telecommunications Engineer, North Eastern Region, has been appointed Assistant Signal Engineer, Signal & Telecommunications, Engineer's Office, North Eastern Region, York.

Mr. Thomas R. Goodes, European Secretary & Treasurer for Canadian National Railways and its associated companies, retired on November 11. At a farewell reception he was handed a cheque by Mr. E. W. Wolff, his Assistant, on behalf of his colleagues in the European offices.

We regret to record the death on November 16, at the age of 57, of Mr. W. B. Stokes, Secretary of the Tyre Manufacturers Conference. Mr. Stokes was personnel Officer of the Dunlop Rubber Co. Ltd. at Fort Dunlop, when he went to the Tyre Manufacturers Conference in June, 1942.

Eastern Region Appointments

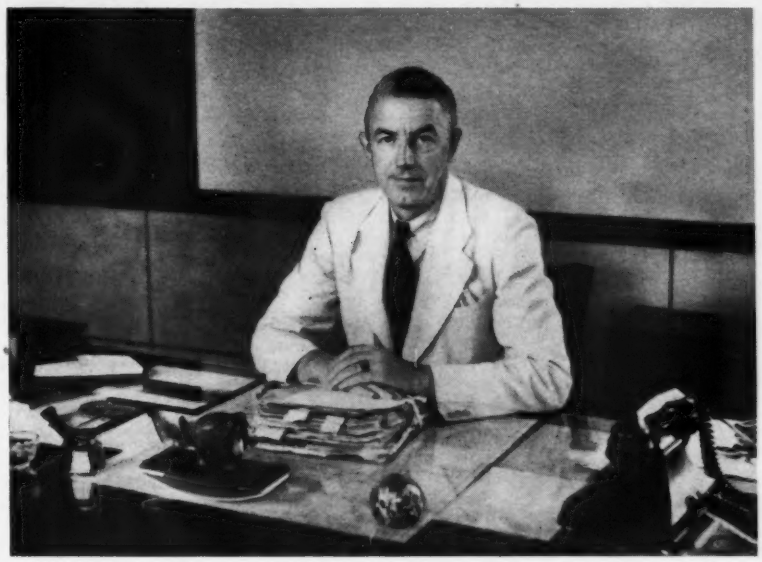
The Eastern Region has announced the following appointments:—

Mr. W. N. Smith, an Assistant in the Steelwork Section of the Civil Engineer's Office, Eastern Region, Kings Cross, as Assistant (Steelwork) in the same office.

Mr. W. B. S. Miller, Assistant District Engineer, Boston, as Assistant District Engineer, Doncaster; he will take up his new duties in December.

Mr. E. R. Battley, Chief of Motive Power & Car Equipment, Canadian National Railways, who, as recorded in our November 2 issue, has retired, joined the company nearly 50 years ago as a machinist apprentice in the motive power shops, and became a qualified machinist in 1908. In 1927 when the union-management co-operative committees were being developed on the Canadian National Railways, Mr. Battley was the machinist member of the committee of experts organised by the railway's Bureau of Economics to study the technical features of the plan which is still in operation today. In 1932 he was loaned to the National Railways of Mexico to conduct a study of machine shops and prepare recommendations for these establishments. He was promoted Chief of Motive Power & Car Equipment in October, 1942, with headquarters at Montreal.

Mr. H. C. Towers, M.I.E.E., M.I.R.S.E., M.Inst.T., formerly Deputy Chief Engineer, Signals, Bombay, Baroda & Central India Railway, who has been appointed Chief Signal & Telecommunication Engineer of the Western Railway (comprising the B.B.C.I.R., Saurashtra Railway, Jaipur State Railway and Rajasthan Railway), received his initial training in the Civil Engineer's Office of the London Underground Railways and was subsequently transferred to the Signal Department for the prescribed course for apprentices in signal engineering. He was trained as an electrical engineer in the School of Engineering of the London Polytechnic in Regent Street. Mr. Towers was appointed to the technical staff of the Signal Engineer's Office of the Underground Railways at Earls Court in 1922, from which he resigned in 1926 to take up the post of Assistant Signal Engineer, Bombay, Baroda & Central India Railway. He was promoted Senior Signal Engineer in 1935 and was in charge of the Bombay signal division and was Signal Engineer of the metre-gauge section (some 2,000 miles) from 1938 to 1946. He was Deputy Chief Engineer (Signals) for the whole Railway from January, 1946, until November 5 of this year, the date of the inauguration of the Western Railway (see our November 9 issue). Mr. Towers is a Fellow of the Permanent Way Institution and Chairman of the Western India Section of the Institution of Railway Signal Engineers and of the Bombay Railway Signal & Telecommunication Society.



Mr. H C. Towers

Appointed Chief Signal & Telecommunication Engineer, Western Railway, India

Mr. J. McGillivray, Chief Book-keeper of the General Mitre Railway, has retired. He joined the Central Argentine Railway in 1926, and remained in the Stores Accounts office until 1937. In 1941 he was appointed Chief of General & Stores Accounts, and he became Chief Book-keeper in 1947. During the last three years, he was also in charge of liquidation of Central Argentine Railway accounts.

Mr. Gwilym Lloyd George has resigned from the board of the Superheater Co. Ltd. on his appointment as Minister of Food.

Mr. Alexander McEwan, who is in charge of the Structural Division of Chamberlain Industries Limited, has been appointed a Director of the company.

Vickers Limited has announced that Commander Sir Robert Micklem and Sir James Reid Young have been appointed Joint Managing Directors of the company. Both have been Directors of the company and of other companies in the Vickers Group for many years. Sir Robert Micklem is Chairman of Vickers-Armstrongs Limited and Sir James Reid Young is Director of Finance & Administration of that company.

Mr. J. C. Carr has been appointed to the board of Thomas Summerson & Sons Limited, the railway siding engineers, and their subsidiary companies, on his retirement from the post of Principal Assistant Secretary in the Ministry of Supply.

Presentation to Mr. W. S. Baron

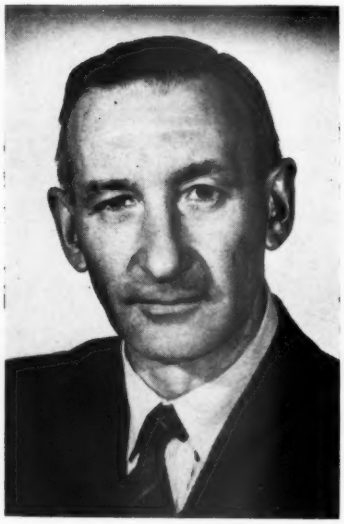
At the Chief Officers' Mess at Paddington on November 15, Mr. K. W. C. Grand, Chief Regional Officer, on behalf of the principal officers of the Western Region, presented a wireless set to Mr. W. S. Baron, who is retiring from the position of Manager of the Great Western Royal Hotel. Mr. Grand said that Mr. Baron had managed the Hotel for over seven years and, during that time, all the officers at Paddington had received the greatest assistance and co-operation from him. They felt that the occasion should not pass without paying tribute to this fact and expressing their good wishes for a happy and healthful retirement. Mr. C. R. Dashwood, Chief Accountant, supported what had been said and Mr. Baron suitably responded.

Mr. R. H. Dobson

Appointed Co-ordinator of Transport of a number of Railways in Central and South Brazil

Mr. R. H. Dobson, F.S.S., M.Inst.T., who was General Manager of the Great Western of Brazil Railway Co. Ltd. until the contract was rescinded by mutual agreement between the Brazilian Government and the shareholders, continued as Sub-Director of the Railway, which has been renamed Rede Ferroviaria do Nordeste. As from October 14 Mr. Dobson was ceded from his duties in the North East of Brazil, at the request of the Minister of Transport and the Director-General of the National Department of Railways and appointed Co-ordinator of Transport of the following Railways in Central and South Brazil: E. F. de Goiás; Companhia Mogiana; Rede Mineira de Viacao; Companhia Paulista; E. F. Sorocabana; Parana Santa Catharina V.F. He was born at Middleton-in-Teesdale, County Durham, and received his early experience with the L.N.E.R. in the Middlesbrough and Darlington Districts. In 1929 he went to Brazil as Assistant to the Traffic Manager of the Great Western of Brazil Railway and in 1932 became Assistant Traffic Manager in charge of Operation. He was promoted to Traffic Manager in 1936 and to General Manager in 1946. Mr. Dobson's new headquarters are situated in the city of Sao Paulo.

Mr. N. Marshall, Deputy Signalling Assistant, Signal & Telecommunications Engineer's Department, Eastern Region, Kings Cross, who, as recorded in our November 16 issue, has been appointed Signalling Assistant (Electrical) in the same Department, completed his apprenticeship on the Great Central Section, L.N.E.R., in 1925, and then joined the Westinghouse Brake & Signal Co. Ltd. as Technical Assistant. Part of his service with that company was spent in South Africa, where he was engaged on re-signalling works on the line between Cape Town and Wynberg and the installation of power signalling at Johannesburg Station. In 1936 he rejoined the L.N.E.R. and has since been closely associated with re-signalling at Doncaster and also in connection with the Liverpool Street-Shenfield electrification. Mr. Marshall has acted as Deputy Signalling Assistant for the past three years.

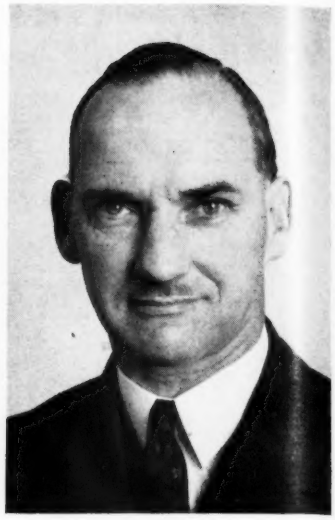


Mr. J. C. Kubale

Appointed Manager, Metropolitan-Vickers-GRS. Limited

Mr. J. C. Kubale, M.B.E., A.M.I.Mech.E., A.M.I.E.E., Assoc.A.I.E.E., M.I.R.S.E., Chief Engineer, Metropolitan-Vickers-GRS. Limited, who, as recorded in our November 16 issue, has been appointed Manager, was born in Melbourne, Australia. He studied at Melbourne Technical College and was apprenticed to the Signalling & Telegraph Department of the Victorian Railways. Between 1925-28 he continued his technical training in the U.S.A., working with the General Electric Company, Schenectady, various American railways, and with the General Railway Signal Company, Rochester, N.Y. He then returned to Australia, where he was appointed an Assistant Engineer on electric traction work in the Chief Electrical Engineer's Department of the Victorian Railways. In 1930 Mr. Kubale joined Metropolitan-Vickers-GRS. Limited in London and for the next nine years was engaged in engineering work for marshalling yards and railway signalling. During the war he served as a Major in the Royal Engineers for four years in the Middle East and Italy; he was made an M.B.E. for services in the Western Desert Campaign and was also mentioned in dispatches. On returning to Metropolitan-Vickers-GRS. Limited after the war, Mr. Kubale was appointed Chief Engineer in October, 1945. He is a Member of the Council of the Institution of Railway Signal Engineers.

We regret to record the death on November 12, at the age of 70, of Sir Thomas Peirson Frank, M.I.C.E., F.R.I.C.S., Chief Engineer and County Surveyor to London County Council, 1930-46, and President of the Institution of Civil Engineers in 1945. He had been a member of the Ministry of Transport committee on experimental roads since 1930 and was a member of the highways research board of the Department of Scientific & Industrial Research from 1935 to 1940. He was a Partner in the firm of Messrs. Coode, Vaughan-Lee, Frank and Gwyther, Consulting Engineers, and had held the rank of Colonel in the Engineer & Railway Staff Corps since 1932. Between 1939-45 he was Co-ordinating Officer, Road Repairs & Public Utility Services, London Civil Defence.



Mr. G. D. D. Greig

Appointed Assistant (Maintenance) to Chief Officer Engineering (Maintenance), Railway Executive

Mr. G. D. D. Greig, Assistant District Engineer, Aberdeen, Scottish Region, who, as recorded in our November 8 issue, has been appointed Assistant (Maintenance) to the Chief Officer Engineering (Maintenance), Railway Executive, joined the Caledonian Railway as a pupil in 1919. After training in the New Works and Permanent Way Depots of the L.M.S.R. District Engineer's Office at Glasgow, he was appointed as Assistant in the District Engineer's Office of the L.N.E.R. in Glasgow in 1926. In 1948 he was transferred to Aberdeen as Assistant to the District Engineer, subsequently becoming Assistant District Engineer. For a time in 1948 he was Acting District Engineer, Carlisle, and in 1950 was chairman of the committee appointed by the Civil Engineers' Committee to consider relaying methods and costs on all Regions.

Mr. J. G. R. Woodvine has resigned from the boards of Metal Industries Limited and Sentinel (Shrewsbury) Limited.

The Brush Aboe Group of companies has announced that Mr. J. Jones has been appointed Managing Director of the National Gas & Oil Engine Co. Ltd. and that Mr. C. F. Barnard has become General Manager and a Director.

Mr. G. T. Smithyman, A.M.I.Mech.E, Assistant to Works Superintendent (Production Planning), Carriage & Wagon Works, London Midland Region, Derby, who, as recorded in our August 3 issue, has been appointed Executive Officer (Carriage & Wagon Production), Railway Executive (located Derby), received his technical education at Derby Technical College. He commenced his railway career as an Engineering Apprentice, Derby Carriage & Wagon Works, in October, 1931, and on completion of his apprenticeship, obtained experience as a Process Inspector. In 1942, he was appointed Assistant to the Works Superintendent (General Duties) and in 1945, Planning Engineer. In 1947 he became Assistant to Works Superintendent (Production Planning), Carriage & Wagon Works, London Midland Region, Derby. During the war, he was Assistant, Planning & Progress, for Aircraft Production.

Passenger Charges Scheme, 1951

Result of a London travel survey: possible effect of fares increase on season ticket and holiday travel

Mr. Julius Jacobs, Secretary, London Trades Council, giving evidence on November 14 at the resumed hearing by the Transport Tribunal of the application by the British Transport Commission to increase rail passenger fares, said that a detailed survey made in 1949 in 2,695 households showed that the amount spent on regular travelling averaged 5s. a week, and that of this amount travel to work accounted for 3s. 9d.

Percentage of Regular Travellers

It was found that 47 per cent. of the people in London made no regular journeys and of the people who travelled to work 39 per cent. did not use public transport. The average expenditure on regular travel where at least one member made a regular journey was 6s. 5d. and the prewar survey on which the price index was based showed that the average family spent 2.5 per cent. of its income in this way. On this basis the family income would need to be £12 6s. 8d. if the proposed increases were made.

Mr. H. Hull, President, commented that the survey showed, surprisingly, that of those who were workers only 58 per cent. travelled by public services. Mr. Jacobs had previously stated that 17 per cent. walked and 14 per cent. cycled to work.

Mr. Jacobs, continuing, said that it was almost impossible for the members they represented to buy season tickets, for it took them all their time to pay their way now. The most they could buy in the main would be a weekly season and then there would be little or no saving. Something like 1½ million were unable to use early morning tickets because of the time at which they had to go to work. He suggested that the B.T.C. should devise a scheme whereby the early morning ticket was available up to 9 a.m.

Mr. J. E. Morrish, for the Post Office Engineering Union, suggested that the establishment of a Central Transport Consultative Committee, under the provisions of the Act, would provide a medium to deal with the sort of difficulty which confronted the B.T.C. at the present time. This committee should bring under review the entire finances of the B.T.C., since nothing short of a complete review would make it possible to provide an efficient, adequate, economical, and properly integrated system of public transport.

The fact that £17 million extra each year would reach the B.T.C. by way of increased passenger receipts, or £21 million if the Tribunal accepted the suggested amendments to the scheme, and that early morning ticket prices would go up an average of 20 per cent., was indirect evidence that hardship would be occasioned. They rejected the implication in the explanatory memorandum that the B.T.C. was justified in its proposals because passenger fares had lagged behind rising costs. Their investigations had shown that long-distance holidays would be heavily reduced.

While it was difficult to estimate accurately in advance the precise discouraging effect of any set of proposals, they considered the entire estimate far too optimistic on this score, and contended that the B.T.C. had overestimated its ability to extract more money from the public and underestimated the consumer-resistance which was bound to arise when an increase of 20 per cent. was sought. As the B.T.C. had in any case to seek an increase in freight charges it might be a better proposition all round if it asked for more from freight and less from passengers. It would bear less harshly on the consumers as a whole.

Mr. Cyril H. Walker, Director of Housing, London County Council, said that when the L.C.C. was developing estates, consideration was given to the cost of travel. Before 1933 it controlled the tramways and extended the services to those new estates. The fares were low-price and there was an all-night service. The structure of the fares was very low and was tapered for workpeople. That system also applied to the tubes. People were encouraged to go long distances to find houses by these low fares. Mobility of labour was an essential part of the life of London and they had many applications involving the transport of population.

The possibility of season ticket holders travelling by car if fares were increased, was mentioned by Mr. H. S. V. Smith, Secretary of the Home Affairs Transport Department of the Association of British Chambers of Commerce. He said that some industrialists had already replaced season tickets with private cars, because travelling costs were cheaper by doing so, and the proposed fares increase was a further incentive to take this step. On some journeys one car was likely to replace two or three season tickets, as a car could carry more than one passenger at no additional cost.

Mr. F. C. H. Smith, representing the British Gas Staff Association, gave a statement objecting to the proposals for the London area. He said that the average fares of gas staff employees were higher than average and a possible increase of 20 per cent. would cause hardship. In 1949 the average weekly expenditure on fares was 8s. 2d. for those with a salary of £650 or over; 7s. 5d. for those receiving between £8 and £13; 6s. 2d. for the £4 10s. to £8 group; and 3s. 7d. for those earning less than £4 10s. The average fares for the gas staff employees was 9s. 6d. a week on going to work and a large proportion of this was spent on minimum fares. People would have to economise in travel, and if that could not be done, they would be faced with demands for a wage increase.

Witnesses to be Recalled

When the inquiry was resumed on Tuesday the President announced that the Tribunal would require Sir Reginald Wilson, Comptroller, B.T.C., Mr. A. B. B. Valentine, Member, London Transport Executive, and possibly Mr. J. E. M. Roberts, Executive Offices (Rates & Charges), Railway Executive, to return to the witness stand at a future date to answer questions put by the members. He indicated that first the Tribunal would like to have an estimate of the actual position of the B.T.C. for 1951.

They also desired information as to the actual amount allowed for by the B.T.C. as a result of the Festival of Britain traffic. They realised that was a very difficult matter to put into figures. Mr. Hull said they would also like to be told what would be the financial results of making all the returns chargeable at 1½d. a mile and what the financial difference would be if all returns were now at what was the monthly return rate.

The President also asked what would be the effect of reducing the proposed season ticket rates by 10 per cent. in the case of non-intermediary season tickets up to 60 miles. Lastly, they required a statement as to the new wage costs, showing the total which it was suggested ought now to be taken into account, and how that total should be distributed between the different services and the grounds on which that distribution was supported. It was not to be inferred from these questions that the Tribunal had come to any conclusion on any topic on which the information would be relevant.

Mr. M. Bass, for the Fire Brigades Union, submitted that the further hardship which would result from higher fares would place an intolerable burden on their members and lead to many of them leaving the London Fire Service.

Mr. L. W. F. Seabrook submitted that people who were compelled to travel for the purpose of obtaining their livelihood should do such travelling at a cheaper rate than those who used the transport facilities for pleasure purposes or of their own free will. After all the static income of the B.T.C. was derived mainly from the workers. The public must be encouraged to use public transport and this could only be done by retaining cheap fares. Therefore he suggested that the B.T.C. should obtain the extra revenue required by further economy measures.

UNITED STATES AS A MARKET FOR BRITISH GOODS.—It is more important than ever to increase the level of exports to the dollar markets and with this in mind the Board of Trade has issued a new publication entitled "Exporting to the United States of America." It is hoped that it will be of particular value to exporters who have not yet got a foothold in the U.S.A. and it has been compiled with the help of the Consular Department of the British Embassy in Washington. There is a brief but comprehensive outline of the main features of the U.S.A. market, the problems connected with selling goods there, and suggested methods of approach. Other chapters deal with the characteristics of the market. The booklet is available at H.M. Stationery Office, Kingsway, London, price 1s. 6d., or through any bookseller.

BRITISH RAILWAYS WINTER PRECAUTIONS.—More mechanical aids than ever before will be used by British Railways this winter to keep the lines open in the event of severe weather. For dealing with snow and ice 800 flame guns and 600 steam lances as well as stocks of de-freezing compounds have been stationed at strategic points. Some 550 snowploughs for patrol work or clearing drifts up to 12 ft. deep are also available and arrangements have been made with military authorities to afford any asistance necessary in the event of a serious snow blockage in any part of the country. By arrangement with the Meteorological Office 51 railway control centres are warned in advance when fog, snow, or frost are expected, and the number of stations co-operating in this scheme has recently been increased from eleven to 14. On electrified sections stocks of de-icing compounds are ready for applying to live rails.

Town Planning and the Western Region

Duties imposed by procedure for implementation of the Town & Country Planning Act, 1947

The Assistant Chief Regional Officer of the Western Region, Mr. H. G. Bowles, was in the chair, and Mr. K. W. C. Grand, Chief Regional Officer, and President of the Society, General Sir Daril Watson, Member of the Railway Executive, and a number of Western Region Officers were present on November 15 when Mr. R. G. Henbest, Estate & Rating Surveyor, read a paper entitled "Town Planning as it affects the Western Region" to the British Railways, Western Region, Lecture & Debating Society, at Paddington.

By the passing of the Town & Country Planning Act, 1947, said Mr. Henbest, the railways (or, rather, the British Transport Commission, as all real property is now vested in the B.T.C.) in common with other large property owners, were confronted with heavy tasks in considering possible claims for loss of development values and inspecting development plans prepared by planning authorities. The difficulties were not lessened by the fact of a time limit.

Procedure in Western Region

To comply with the 1947 Act as it affected the Western Region, it was necessary first to establish, with the help of the Chief Regional Officer, a procedure to enable departmental Officers to investigate their particular aspects of the new problem. The major matters not only concerned land used for railway purposes, but also land not required, and often land not owned at all which may be affected by railway proposals. Moreover, the job had to be tackled at a time when all departments were fully engaged in adjustments of procedure and policy on nationalisation.

In the case of planning applications, the Act and the many subsequent Orders as to procedure and exemptions, have increased the control of the local planning authority over railway development. Basically, all development and some uses of land now require consent. Certain exceptions were made in the Act, and more have been allowed under a General Development Order made by the Minister. Thus any development in connection with movement of traffic by rail is exempt, with certain exceptions, carried out either by the undertaker or their lessees, *i.e.*, tenants for a term of years. Thus licensees in goods yards are excluded.

This presents no difficulties, but the exceptions are: Construction of railways, construction, reconstruction or alterations involving material alterations to the appearance or design of certain buildings. These are stations, bridges, offices, residential buildings or buildings for manufacturing or repairing work, provided these are not wholly within a railway station. The sting, Mr. Henbest pointed out, is in the tail of this provision, as the question of development wholly within a railway station is a complex one.

Checking of Plans

On receipt of a Scheme plan from the Chief Regional Officer, it is checked as to liability for development charge, for a Board of Trade Licence in the case of industrial buildings, and to certain other considerations. There is also the usual question of bye-law consent, which only affects non-railway matters.

The Civil Engineer then supplies up to nine sets of plans; either four or five for planning consent application and two if a development charge has to be assessed, and two for bye-law approval.

The application is then made under one of two procedures. Under the Defence Regulations 56A the Minister of Works sets a limit upon works expenditure without a licence. The present limit is £500 in the case of certain undertakings—which includes railways. Over this figure a licence, or in the case of the railways an authorisation of a Government Department, is needed. Where an authorisation is required the department concerned can grant what is known as "deemed" planning consent. The other method is an application to the local planning authority where the work does not come under the heading of maintenance and the estimated expenditure is less than £500.

The local planning authority is required to grant consent with or without conditions in two months, and if it does not, the application is regarded as refused. An appeal to the Minister of Housing & Local Government can be made within 28 days. The procedure for a "deemed" consent is more complicated. The forms go to the local planning authority as before, more for consultation and checking purposes. Assuming there is no trouble, three forms are returned completed and both these and the Works Authorisation forms are passed to the Minister of Transport, and in due course both consents are obtained.

If there is any difficulty and the local planning authority and the railway cannot agree, one form is returned and the other two pass to the Minister of Housing & Local Government for observations.

Railway Schemes Handled

The number of cases handled by the Western Region now amounts to 310, of which 100 relate to the period 1943-1947 and 210 to the period 1947-1951, but restrictions on expenditure have limited the rise to only twice the old average.

As regards "operational land," and land which could clearly be surplus to requirements and therefore eligible for claims, the normal Western Region procedure was used for the certification of the land for sale.

At the same time, District Estate Agents were set the almost impossible task of inspecting, providing preliminary valuations and submitting their cases to Headquarters, impossible because they were then taking over penetrating properties, and all the files, agreements and so forth, and also surrendering others to other Regions, though the Western Region has taken over more than it lost.

At Head Office, plans were prepared and the cases submitted to the Chief Regional Officer for consultations with the Departmental Officers. The Deeds Office prepared reports on all cases intended to be the subject of claims. Checking the details of every case involved questions of tithe, land tax, tenancies, and so on, before the claim form could be completed. District Estate Agents had to consider about 1,000 sites of various descriptions. In the final result just over 300 claims were lodged.

The next stage has been the receipt of preliminary valuations from District Valuers. Sixty days is the time allowed for consideration of their figures. In some cases, however, negotiations made it necessary for this time to be extended before agreement could be reached.

Development Charges

The railways are only liable to pay a charge for development of operational land acquired after July 1, 1948, or for development of land which in the event proves to be required when the railways made a claim for loss of development value. Railways will be liable to pay the charge for non-railway developments on any land, but if it should be "operational" this fact will be taken into account when the charge is assessed. A careful check must be kept on all works schemes to see that the necessary application is made only in respect of lands liable to development charge. The difficulty is that some physical developments may fall partly on exempted land and partly on non-exempted lands, whether recently purchased or the subject of a previous claim for loss of development value.

The principal problem for the railways in this connection is the actual nature of their development. Valuers can reasonably deal with developments such as houses, factories, and the like, because these are readily saleable and so comparable, whereas the construction of a new line, the forming of embankments, and so on, cannot be dealt with in the same way. It is true that these things have values for transport purposes, but costs these days possibly make many projects in themselves uneconomic, although as a general contribution they would show savings. It is this problem which the B.T.C. and the Central Land Board are trying to solve.

It has been agreed with the Central Land Board that a new mineral line being constructed by the London Midland Region shall be regarded as a test case to see if it is possible to settle upon a formula for general application.

Local Authorities' Development Plans

Preparation for the development plans by local planning authorities has presented the railways with the most difficult of all problems created by the Act, because the local planning authority has to prepare detailed information on which to base its survey which then serves as a basis for the plan. To do so, the planning authorities have had to come to the railways to obtain primarily information as to railway schemes, land ownership, and future land requirements, and generally to ascertain the B.T.C. policy on future developments. In addition, the period for discussion was limited, in that the local authorities had to complete their Survey, and submit it by July 1, 1951.

So far as the railways were concerned, it has not been felt desirable to have land designated for railway purposes, partly because the time factor could not be assessed, and partly to avoid financial difficulties which might otherwise arise, so generally it has been requested that land be zoned. The plan itself has to forecast general development over 20 years, and progress maps are included to show the breakdown into the first five, second five, and last ten years. The plan can be amended at any time.

After a public local inquiry to hear objections, the Minister is left to decide whether he will accept the plan as presented.

Once this is approved, the local planning authority will be largely bound by the proposals set out. The carrying out of the plan will depend largely on private development within the framework, but the more essential changes will be carried out by the acquisition of the areas designated for these purposes. In the Western Region, the principal feature is the size of the physical task of dealing with plans of the 50 local planning authorities concerned.

Investigation into Railway Schemes

In 1948, the Chief Regional Officer set in motion an investigation into the existing railway schemes. As a result all local planning authorities are aware of the schemes likely to mature in the next ten years, but details often are not available, or the probabilities are uncertain.

The Civil Engineer has provided the Estate & Rating Surveyor's Department with 2,000 6-in. sheets showing the complete land ownership by counties within the Region. Many items had to be checked or added because of Regional adjustments. These plans are used to enable both draft and deposited plans to be checked. As the county maps are on a 1-in. scale, town maps within counties and all county borough maps are on a 6-in. scale.

When a plan is checked it is circulated to the departments for observation; subsequently their views are co-ordinated and then passed on to the planning officer of the particular authority. With draft plans, neither side can reach definite conclusions, so that when plans are deposited the Civil Engineer must again inspect and copy or photograph the plan maps, and the procedure then is followed through as before.

Objections to Development Plans

Objections must be made where land is clearly already operational or known to be required for future works, and is shown on the plan as zoned for other purposes. The actual form of objection is settled with the Chief Solicitor, who makes the objection for the B.T.C.

The Western Region so far has dealt with nine development plans, and in only one is a full-scale objection to be made, and this case is the first in which the local planning authority has proposed a radical change in railway lay-out and working procedure.

The principal concern has been to ensure that railway land used or held for railway purposes and additional land is correctly shown as such. In more doubtful cases it is desirable that this should be similarly shown, but in some cases other zonings are allowed to stand, on the understanding that the railway user, if required, will over-ride that shown on the plan. Unfortunately, states Mr. Henbest, the Ministry has not yet shown itself amenable to any form of "blanket" arrangement of this nature, and it is necessary to raise the question on individual items. Nevertheless, local planning officers have done much to help the railways in this matter.

The paper, Mr. Henbest points out, does not cover the whole of the 1947 Act as it affects the railways, because no reference is made to changes in compulsory purchase law and procedure, the preservation of ancient monuments, and other aspects affecting planning.

Largest Walking Dragline in the World

A new excavator specially designed for iron ore mining at Corby

The walking dragline shown in the accompanying illustration has been installed by Stewarts and Lloyds Limited in an ironstone quarry at Corby, Northamptonshire, and is the largest of its kind in the world. It weighs 1,600 tons, has a dumping radius of 260 ft., and in its working position the head of the jib is 175 ft. above the ground. The bucket weighs 22 tons and digs about 27 tons at a fill.

At the time that the quarry was opened it was realised that a new method of stripping the overburden would be necessary when a depth of 100 ft. was reached. Various possible methods were investigated by the company, and, in 1947, the firm of Ransomes & Rapier Limited was asked to design and build a machine to meet the special needs of the case.

The base structure of W.1400 has a diameter of 48 ft. and weighs 227 tons. Around the centre post inside the "tub" is a gear-wheel over 33 ft. dia. with 208 teeth each 19 in. deep. The floor space measures 4,387 sq. ft. and the roof is 45 ft. above the ground. When it is necessary for the machine to move along the quarry the walking mechanism is put into operation and the heavy machine moves slowly along covering about 200 yd. an hour in steps of approximately 7 ft.

Walking dragline recently put to work at the Corby ironstone quarry of Stewarts and Lloyds Limited

The machine is driven entirely be electricity taken at 6,600 volts through two trailing cables. There are two main synchronous a.c. motors and each drives three generators which supply the power to the d.c. driving motors. There are 14 driving motors each of 225 h.p. Four operate the drag, four the hoist, two the slewing, and four the walking mechanism. All these motors are interchangeable and provide a total of 3,150 m.p.h. As the average working day of the machine is 20 hours illumination is provided by a floodlighting system on the jib which uses ten 1,000-W. and three 500-W. projectors. There is a beacon at the head of the jib to warn passing aircraft.

In 1947, the conception of a tubular jib 282 ft. in length was considerably in advance of anything then in existence, but it was agreed to make the necessary steel, and from it the tubes for the jib. The design for the jib was evolved by Tubewrights Limited, a subsidiary of Stewarts and Lloyds Limited, in collaboration with Ransomes & Rapier Limited.

The jib consists of a large number of steel tubes of varying lengths and diameters ranging from 1¼ in. to 16 in. welded together. In many places several tubes of different sizes meet at the same point. There are butt welds, where tubes meet end to end, and branch welds of varying angles. It will therefore be appreciated that a great deal of research and exhaustive tests had to be carried out.

British Railways to Experiment with 50-cycle System

British Railways have decided to carry out a trial of the single-phase 50-cycle a.c. system of electric traction. The trial will be carried out on the Lancaster-Morecambe-Heysham Line, which was originally electrified experimentally in 1908 at 6,600 volts, 25 cycles, the equipment of which is now life expired. Various methods and types of equipment are to be tried out, and the overhead line voltage will be varied from the present 6,600 volts up to, and including, 20,000 volts.

This system, in which current is fed directly to the trains at high voltage and at the standard national frequency, was recommended by the British Transport Commission in its recent report on Electrification for consideration in the care of secondary lines, the recommended system for lines carrying heavier traffics being 1,500 volts d.c. overhead. It introduces special problems, but also several advantages, including the use of a lighter overhead system, fewer and simpler substations, and the absence of power cables alongside the track. As a result of recent advances in technical development it may now have a wider field of application.

Parliamentary Notes

Steel and Road Haulage Policy

When the Commons resumed the debate on the Address on November 12 an Opposition amendment regretting that the King's Speech contained "proposals relating to the iron and steel industry and road haulage which would not assist the national effort, but would create anxiety and uncertainty in two vital industries," was moved by Mr. G. R. Strauss, former Minister of Supply.

The hiving-off of a large part of road transport from the unified transport system would have a most serious effect on the railways, on which the whole fabric of British industry, Mr. Strauss maintained.

A Bill to denationalise the steel industry would be brought before the House in February, Mr. Strauss continued. It seemed that some sections of Conservative opinion were alarmed by the threat to reverse nationalisation of steel industry, and realised that to do so might well upset the national apple-cart.

Compensation to Investors in Steel

If the industry was to be handed over to private investors, when the time came, to re-transfer the shareholdings to public ownership, those investors would be compensated on the principle that under no circumstances would the total compensation already paid out be increased. In any such compensation calculation full account would be taken of any dividends which might have been distributed to stockholders in the intervening period over the 3½ per cent. provided by British Iron & Steel Stock.

Case for Steel Denationalisation

Mr. Duncan Sandys, Minister of Supply, said the Government remained convinced that steel nationalisation was a very grave error. It was their duty to restore free enterprise without which the industry could not make its maximum contribution to national output; steel and steel products were half of Britain's total exports.

The longer they put it off the more difficult denationalisation would become. To stabilise the position in the interval between now and the time when the denationalisation Bill would be introduced, the Government had decided with the Iron & Steel Corporation, as laid down in the Steel Act, to issue a statutory direction to the Corporation under the powers conferred by Section 4 of the Act.

Before the Government policy could be put into legislative form, said Mr. Sandys, they would have to consult the principal bodies representing the main interests affected, including the British Iron & Steel Federation and the T.U.C.

Referring to the financial problems of transferring the industry to free enterprise, he said that since February the Corporation had been in direct or indirect control of some 290 companies, some of them wholly owned by the Corporation, and others subsidiaries in which the Corporation only had a controlling interest. As to compensation, some £240 million had been, or was to be paid in the form of Iron & Steel Stock guaranteed by the Treasury. Much of that had changed hands recently, and the Corporation had altered the financial structure of the companies concerned.

Board for Steel Industry

The creation of a board, representative of Government, management, labour and consumers, would be an essential feature of the Government proposals. Such a board, unlike the Corporation, could embrace the whole industry, which would be an additional advantage.

The scheme announced by the late Government for allocating steel, which had not yet come into operation, would go ahead and would include both general steel and alloy steel. The necessary statutory order would be issued shortly and, the scheme itself would take effect from February 4.

Road Haulage and the Labour Market

Mr. Frank McLeavy (Bradford East—Lab.) asked if the work of the B.T.C. was to be thrown to the winds at the behest of private profit-seekers. It was fantastic for the Government to contemplate increasing the radius of private haulage, with its inevitable and immediate increased demand on the labour market, at a time when the Ministry of Labour was seeking to get a better balance of labour as between the essential industries.

Mr. Geoffrey Wilson (Truro—C.) said that the B.T.C. report for 1950 showed that whereas the railways earned a profit, British Road Services showed a deficit of £1,106,000 for the same period.

Abolition of Executives

The Government could repeal many of the ancient statutes imposing restrictions on the railways, added Mr. Wilson, and effect economies by restoring restaurant-car services to railway management, abolish the Hotels and Docks Executives and give greater authority to the Regions in regard to the co-ordination of road and rail traffic at Regional or divisional level. He hoped that they would do something to give the railways greater flexibility in charging.

Sir David Maxwell Fyfe, Secretary of State for Home Affairs, said the Government intention was to diminish the monopolistic powers of the B.T.C. over the long-distance section of the road haulage industry, and to give an opportunity to those private hauliers who wished to do so to return into a business from which so many of them had been ousted by the Transport Act.

Road haulage, he continued, was a matter of local application and could only be carried out by small units which could give that application in the country. The specialised service free hauliers could render to trade and industry could not be replaced by a nation-wide undertaking. The Government was interrupting the present process because the line pursued by the Transport Act and the B.T.C. was not the way to integration.

He did not think that anyone in the House could say that the public were getting a better service; those who used the Commission's services did not think so.

Repurchase by Road Hauliers

The Road Haulage Executive, said Sir David Maxwell Fyfe, had delivered notices to operators whose acquisition was pending, offering them, if they wished, a postponement of the date of transfer for six months. Some 80-90 cases would be affected. That dealt with the position up to the introduction of the Bill.

People who had been acquired would have to be dealt with by legislation, which would be discussed in the House. Those already taken over would have the right to come back into business but they would have to submit to a licensing system which would protect the railway companies, the existing hauliers, the Commission and everyone else, and the public ownership would have to submit to the same point.

The 25-mile limit would be altered but there would have to be consultation with all those affected, including the Commission, the Road Haulage Executive, and the private interests that were involved, before that was done. Before legislation was introduced, the Commission and the industry, as well as others, would have to be consulted. The general effect of the Transport Act might be evident, but much of the B.T.C. internal organisation was still a closed book.

Mr. James Callaghan (South East Cardiff—Lab.) said that the reason why British Road Services had made a loss was because they took over so much junk and had had to renovate vehicles almost wholly, because they could not buy new vehicles as these were going for export.

Failure of Nationalisation

Mr. J. S. Maclay, Minister of Transport & Civil Aviation, winding up for the Government, said that throughout the whole question of nationalisation, they had never seen one sign from the Opposition of concern for the national interest. When they came back to power, if they ever did, and found that the steel industry was producing with the same magnificent efficiency as it was when they took it over, were they still going to re-nationalise it?

There were cries of "Yes" from the Opposition, and Mr. Maclay said, "Well, why? Let us have no more nonsense about this business of the national interest from Members opposite."

They must get a greater sense of urgency into the transport system, an urgency which could never come under the present arrangement of a heavy, cumbersome system. It could not avoid being cumbersome; that was the difficulty. The Government believed that the policies they were advocating were right and they would work for them, and their sole object would be the very best interest of the nation.

On a division the Opposition amendment was defeated by 320 votes to 281.

Questions in Parliament

Questions on Nationalised Industries

At the end of questions on November 12 Mr. Harry Crookshank (Leader of the House of Commons) said the problem of how to deal with Parliamentary questions regarding the nationalised industries had for some time past been a matter of concern in all parts of the House, and the Government felt that sufficient experience had now been gained to justify the setting up of a Select Committee. It was the Government's intention to ask the House to agree to the appointment of a Select Committee to investigate the whole of that problem and report to the House. He suggested that the existing arrangements should continue until the House had received and considered the Report from the Select Committee.

Mr. F. J. Erroll: Would it not help the work of the Select Committee if rather more latitude were allowed in the answering of these questions in the interval, so that we can all see the benefits which may accrue from Ministers answering questions?

The Speaker: The practice in the last Parliament was one whereby my predecessor exercised a certain discretion to allow certain questions which otherwise would not have been allowed. For my part I am prepared to continue to try to exercise that discretion, but on the same terms as my predecessor, namely, that my discretion shall not be questioned nor argued about in the House.

Mr. John Paton (North Norwich—

Lab.): Can the Minister give the terms of reference of the Committee, or at least indicate their scope?

Mr. Crookshank: The scope of it is to investigate the problems of questions on nationalised industries. The terms of reference will be placed on the Order Paper as soon as possible.

London-Manchester Train Services

Mr. F. J. Erroll (Altrincham & Sale—C.) on November 12 asked the Minister of Transport what steps were being taken to improve the punctuality of train services between London and Manchester.

Mr. J. S. Maclay: This is a matter for the B.T.C., and I am asking Lord Hurcomb to write to Mr. Erroll about it.

Mr. Erroll: That is the sort of answer we used to get before the General Election. Under the 1947 Act the Minister has power to ask for information from the B.T.C.

Mr. Maclay: Perhaps Mr. Erroll will await a statement which I understand the Leader of the House will be making at the end of questions today.

Staff & Labour Matters

Railway Wage Claim

At the meeting on November 14 between the Railway Executive and the three railway unions to discuss the Railway Staff National Tribunal award, the Railway Executive advised the union representatives of its acceptance of the award, already accepted by the unions.

The new rates will be applied to the week beginning November 26 and arrears due under the award will be paid on December 20 or 21, as the case may be.

The cost to the Executive in a full year of the additional salaries and wages is £14,200,000. The Railway Executive informed the unions that as there is no possibility of this sum being obtained by further economies or other means, it had to ask the B.T.C. to apply to the Minister of Transport, under the powers conferred on him by Section 82 of the Transport Act, for authorisation of an increase in freight charges. The Commission has made application to the Minister accordingly.

Engineering Wages

In response to the C.S.E.U. claim for an increase of £1 a week, the Federation of Engineering & Allied Employers last week offered an increase of 11s. a week for adult male workers in the engineering industry, in addition to an extra week's holiday. The offer was not accepted and it was decided by the employees' representatives to refer the whole matter to the C.S.E.U. General Council meeting in York on November 21. The cost of the employers' offer is estimated at £70 million a year.

Meanwhile, at a special meeting of the national committee of the A.E.U., the biggest of the unions affiliated to the C.S.E.U., in London on November 18, it was decided to accept the employers' offer. This decision came before the York meeting of the C.S.E.U.

Miners' Pay Claim

A meeting of the National Joint Negotiating Committee took place in London on November 18 to consider the miners' claim for increased pay. The meeting adjourned until November 22 and no statement was issued after the meeting. The claim is for an increase of 23s. a week in the minimum rate for underground workers, making the basic rate £7 10s. a week; £1 a week increase for surface workers, making the minimum rate £6 10s.; and a flat-rate increase of 3s. a shift for pieceworkers.

Contracts & Tenders

The Gloucester Railway Carriage & Wagon Co. Ltd., has received an order, subject to the usual confirmation, from the Toronto Transportation Commission, Canada, for 104 57-ft. subway cars for the new Toronto subway system. The contract is valued at nearly $8,000,000, or approximately £2,500,000.

The Crown Agents for the Colonies have placed a contract with Cravens Railway Carriage & Wagon Co. Ltd. for 50 bogie low-side wagons for the Malayan Railway.

The Turkish State Railways have recently placed a contract with Simmering-Graz-Pauker A.G., Vienna, Austria, for 40 goods wagons, and 50 third class and 10 second class passenger coaches.

The Board of Trade Special Register Information Service states that the First Secretary (Commercial) at the British Embassy, Brussels, has notified the Commercial Relations & Exports Department that the Belgian State Railways have issued a call for tenders (No. 2651) for three lots each of 150 electric circuits—alternating current, with connections and relays as per specification.

Tenders should reach the Societe Nationale des Chemins de fer Belges, Direction du Materiel et des Achats, Brussels, before December 12. A copy of the tender documents is available for inspection by representatives of United Kingdom manufacturers at the Board of Trade, S.W.1; reference C.R.E. (IB) 75628/51 should be quoted.

According to a further report from the Board of Trade Special Register Information Service the State Railways of Thailand have issued a call for tenders (No. B.E. 2494) for the supply of 100 all-steel bogie carriages complete with all equipment and fittings as follows:—

9 Bogie first class day and night carriages
9 Bogie second class day and night carriages
4 Bogie first and second class carriages
45 Bogie third class carriages
15 Bogie third class cars with buffet
10 Bogie third class carriages, with brakevan
8 Bogie restaurant cars

Tenders should reach the Stores Superintendent, State Railways of Thailand, Bangkok, before 2 p.m. on December 24. A copy of the tender documents and drawings is available for inspection by representatives of United Kingdom manufacturers at the Board of Trade, S.W.1. A second copy of the tender documents (without drawings) is available for loan to United Kingdom manufacturers in order of written application to the Department. Reference C.R.E.(IB)75197/51 should be quoted.

The closing date of the call for tenders (No. 29/NE) issued by the Reconstruction Procurement Committee of the Ministry of Communications, Athens, for track switches has been extended from December 4, to December 14.

Copies of the revised definite clauses are available for inspection at the Board of Trade, Commercial Relations & Exports Department. The tender was previously referred to in our November 9 issue.

Notes and News

B.E.T. Leases West End Block.—British Electric Traction Co. Ltd. has taken an 84-year lease on Stratton House, Piccadilly, London, W.1, for use as office premises.

Vacancy for Junior Assistant District or District Engineer. — Applications are invited for the position of junior assistant district, or district engineer, required by a British railway company operating in Chile and Bolivia. See Official Notices on page 587.

Institute of Transport: Northern Ireland Section.—The monthly meeting of the Northern Ireland Section of the Institute of Transport was held on November 15 in the U.T.A. headquarters, 21, Linenhall Street, Belfast, the Chairman, Mr. James W. Hutton, presiding. The speaker was Mr. M. A. Cameron, Principal Traffic Officer, British Transport Commission, who read a paper on transport conditions in Great Britain.

Withdrawal of Eastern Region Train Services.—In consequence of essential engineering work the Eastern Region of British Railways announces that, as from December 3, the passenger train services will be withdrawn from Chesterfield Market Place, Arkwright Town, Bolsover South, and Scarcliffe Stations. Bolsover South and Scarcliffe will be closed completely to all traffic. Arrangements will be made for the working of traffic to and from Arkwright, Bolsover, and Markham Collieries.

Great Western Railway (London) Dramatic Society.—Many times since it was founded in 1922 the Great Western Railway (London) Dramatic Society has shown its ability in producing both period and modern plays, and its presentation of "This Happy Breed" on three occasions last week was no exception to the rule. This play by Noel Coward, which portrays the life of a London family in Clapham during the period between the two world wars, was one to which the cast did full justice. The production was handled by Mr. Arthur E. Clapp, who also played the part of Frank Gibbons, and who succeeded Mr. Percy Grumbridge as producer last year. The enthusiastic reception the players received from the audience was ample evidence of the quality of his work and of the keenness and ability of the supporting cast.

Portraits Unveiled of Great Western of Brazil Railway Managers.—In the headquarters in Pernambuco of the Rede Ferroviaria do Nordeste (former Great Western of Brazil Railway), portraits were unveiled recently of the last two general managers of the Great Western of Brazil Railway, Dr. Manoel de Azevedo Leao (1936-46) and Mr. R. H. Dobson (1946-49), whose biography appears in our personal columns this week. Dr. Gercino de Pontes, General Administrator, presided at the ceremony, which exemplified the harmonious transfer of the system to the Brazilian Government and the continued good relationship with the British staff remaining. Dr. Leao praised the work done by both British and Brazilian railwaymen, particularly during the war, and looked forward to the prosperous future of the line under the direction of Dr. de Pontes. In a few years time it would be among the best equipped in Brazil. Mr. Dobson expressed his gratitude to Dr. Britto Pereira

Filho, now Director General, National Department of Railways, and to Dr. de Pontes for their friendship, specially during the period of transition from company to State ownership of the railway.

New Chinese Rail Link with Indo-China.—The Chinese Communist authorities, according to local reports, have announced completion of a railway linking China with Indo-Chinese territory controlled by the Vietminh rebels. The 200-mile new line is an extension of the line from Hunan, and reaches the Indo-Chinese border at Chennankwan.

Glasgow-Euston Express Derailed.—Seven coaches of the 10.30 p.m. express from Glasgow to Euston were derailed as the train was crossing from the up fast to the up slow lines in Polesworth Station early on the morning of November 19. The locomotive overturned, but the coaches were held upright by the platform. One passenger was taken to hospital and another was treated on the spot. The driver and fireman received cuts.

Estimated Increase in Working Population.—The Ministry of Labour & National Service announces that the number of operatives reported as working short time in the manufacturing industries in September was 66,000 as compared with 35,000 in June. On the other hand, the number working overtime was 1,277,000 compared with 1,254,000 in June. The total working population is estimated to have increased during September by 31,000.

Presentation of First-Aid Awards at Paddington.—In connection with the Western Region centre of the St. John Ambulance Association, the presentation of two Class 1 awards and 18 Class 2 awards was recently made by Mr. K. W. C. Grand, Chief Regional Officer, Western Region. Mr. H. Adams Clarke, Chief Officer (Staff & Establishment), and Doctor H. H. Cavendish Fuller, Chief Medical Officer, Railway Executive, were among those present. Mr. Grand said that the awards were based solely on the nature of the injury dealt with, efficiency of treatment, and the degree of improvisation necessary in an emergency. Mr. R. Burgoyne, Regional Staff Officer, said that the real test of a first aider was what happened on the spot when an accident occurred, and he personally had a very high appreciation of the way those present had acted in an emergency. Mr. Gilbert Matthews, Operating Superintendent, proposed a vote of thanks to Mr. Grand.

Landslip on Simplon Line.—An improvised passenger service over the Simplon route was begun on November 16, after the blocking of the railway by a landslip on the Italian side of the Simplon Tunnel, as recorded in last week's issue. Passengers are being conveyed by motorcoach between Varzo and Domodossola.

British Railways Coal and Steel Carryings.—Deep-mined and open-cast coal cleared by British Railways last weekend totalled 387,170 tons to make 3,237,800 tons for the week. The latest figures for iron and steel from the principal steelworks show that 190,042 tons were conveyed during the week ended November 10.

London Midland Region Dramatic Society.—From November 15-17 the London Midland Region (London) Dramatic Society gave three performances of the two-act play "Murder at the Vicarage" at the Rudolph Steiner Theatre. Some of the members of the cast are well known to followers of the London amateur stage, and they included Jack Pegg, the producer of the play, who took the part of Lawrence Redding the artist, Reginald Brockwell as the Rev. Leonard Clement, Reginald Barker as the Curate, and Beckie Pass as Miss Marple. As usual, the standard of acting was high, but one felt that the parts allotted to Jack Pegg and Reginald Barker hardly offered full scope for their talents.

Modernisation of Whitechapel Station Signalling.—On November 17 the existing locking frame in the signalbox at Whitechapel (District Line) was taken out of commission and replaced by a new 47-lever locking frame with miniature levers of the full-stroke type. At the same time a new relay room was brought into use. The power frame controls modern signal and point equipment on the track and the signals are of the two-aspect colour-light type with junction indicators. Existing d.c. track circuits have been superseded by a.c. condenser-feed type track circuits.

Budapest-Zagreb Line Closed.—Hungary has closed the line to Jugoslavia running between Budapest and Zagreb. The only railway link now open between the two countries is the direct line between Belgrade and Budapest.

Institution of Civil Engineers.—At a meeting of the Institution of Civil Engineers, Great George Street, Westminster, London, S.W.1, to be held at 5.30 p.m. on December 11, Mr. K. E. Hyatt and Mr. G. W. Morley will read a paper on "The Construction of Kafr el Zayat Railway Bridge."

Railway Students' Association. — On December 5, at 6 p.m., Mr. F. G. Maxwell, Operating Manager (Railways), London Transport Executive, will read a paper on "London's Next Tube," before the Railway Students' Association at the London School of Economics & Political Science, Houghton Street, Aldwych, London, W.C.2

British Aluminium Co. Ltd. Offices.—The former offices of the British Aluminium Co. Ltd. have been derequisitioned by the Government, and as from December 1 all correspondence should be addressed to Norfolk House, St. James's Square, London, S.W.1; telephone Whitehall 7868; telegraphic address: Britalumin, Piccy, London.

General Electric Co. Ltd. Extensions.—Additional facilities to improve the production of electrical generating equipment were inspected recently by representatives of the British Electricity Authority, British Railways, and leading engineers and industrialists, at the General Electric Co. Ltd. works at Witton. Sir Harry Railing, Chairman, said at a luncheon following the inauguration of the plant that the works at Witton were started in 1901, when the salaries and wages bill was only £3,276, whereas today it was nearly £3¼ million.

Ransome & Marles Bearing Co. Ltd.—Mr. F. W. Baker, Chairman, stated at the annual general meeting of the Ransome & Marles Bearing Co. Ltd. that production and sales during the year had broken all previous records. The capacity of the plant had steadily increased, and higher figures could be established, provided materials, adequate labour, and power were available. Some difficulties had been experienced in keeping up the flow of raw materials and supplies. The balance of orders on hand was the greatest in their history and they were compelled to quote protracted delivery dates for new business. It was in anticipation of such a situation that the project for the new factory at Annfield Plain was initiated some 12 months ago.

Special Trains for Scottish Rugby International Match.—Thirty special trains, many of them long-distance ones, will converge on Gorgie, Murrayfield, and other stations in Edinburgh tomorrow (Saturday) for the rugby match between Scotland and South Africa. Six specials

Mr. K. W. C. Grand, Chief Regional Officer, Western Region, presenting one of the St. John Ambulance awards at Paddington

OFFICIAL NOTICES

URGENTLY REQUIRED: 200 tons 80/90-lb. secondhand Bullhead Rail.—DUDLEY VALE LTD., 3, Buckingham Place, S.W.1. VICtoria 0252.

CIVIL ENGINEERING: Junior, Assistant District, or District Engineer required by British Railway Company operating Chile and Bolivia. Candidates must have had some experience in maintenance and constructon of track work, bridges and buildings. Only men with railway experience should apply. Salary according to qualifications and experience. Free quarters, passages, allowances, etc., provided. Applications with full particulars of qualifications and experience to Box 5403, c/o CHARLES BARKER & SONS LTD., 31, Budge Row, London, E.C.4.

RAILWAY MAINTENANCE PROBLEMS. By H. A. Hull (late District Engineer, L.M.S.R.). Valuable information. With much sound advice upon the upkeep of permanent way. Cloth, 8½ in. by 5½ in. 82 pp. Diagrams. 5s. By post 5s. 3d. *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

BOUND VOLUMES.—We can arrange for readers' copies to be bound in full cloth at a charge of 25s. per volume, post free. Send your copies to the SUBSCRIPTION DEPARTMENT, Tothill Press Limited, 33, Tothill Street, London, S.W.1.

TYNE IMPROVEMENT COMMISSION

APPOINTMENT OF AN ASSISTANT CIVIL ENGINEER.—Applications are invited for the appointment of an Assistant Civil Engineer in connection with the design, maintenance and construction of dock and harbour works. Applicants must be qualified persons having experience in the design and construction under contract and by direct labour of structural steelwork, jetties, quays, railway layouts, buildings and other works appertaining to port installations. Applicants will be required to pass a medical examination and to become members of the Commissioners' Superannuation Fund. Commencing salary according to qualifications and experience will be on the scale £535 rising to £700 per annum (plus War Bonus at present £65 per annum). Applications stating age, education and training, professional qualifications, experience in the preparation of plans, contract particulars, and construction of civil engineering works, and giving the names of two referees, should be addressed to the undersigned so as to be received not later than December 14, 1951. J. K. MCKENDRICK, Secretary, Tyne Improvement Commission, Bewick Street, Newcastle-upon-Tyne, 1.

INTERNATIONAL RAILWAY ASSOCIATIONS. Notes on the work of the various associations concerned with International traffic, principally on the European Continent. 2s. By post 2s. 2d. *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

LEADING Railway Carriage Draughtsman required with general experience, especially of unit construction. Diesel railcar experience very desirable.—Apply Box 263, *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

JUNIOR TRAFFIC OFFICIALS with railway traffic apprenticeship experience. Age about 25, single, required for service on railways in Peru and Bolivia. Apply to the Secretary of the PERUVIAN CORPORATION LIMITED, 144, Leadenhall Street, London, E.C.3.

THE "PAGET" LOCOMOTIVE. Hitherto unpublished details of Sir Cecil Paget's heroic experiments. Eight single-acting cylinders with rotary valves. An application of the principles of the Willans central-valve engine to the steam locomotive. By James Clayton, M.B.E., M.I.Mech.E. Reprinted from *The Railway Gazette*, November 2, 1945. Price 2s. Post free 2s. 3d. *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

TRANSPORT ADMINISTRATION IN TROPICAL DEPENDENCIES. By George V. O. Bulkeley, C.B.E., M.I.Mech.E. With chapters on Finance, Accounting and Statistical Method. In collaboration with Ernest J. Smith, F.C.I.S., formerly Chief Accountant, Nigerian Government Railway. 190 pages. Medium 8vo. Full cloth. Price 20s. By post 20s. 6d. *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

will bring spectators from Hawick and other places in the Scottish Region to Edinburgh, and from Cupar and other points in Fife four trains will be run. Among the specials from Glasgow (Queen Street and Central) Stations will be a dining car train and 18 specials will be run locally in the Edinburgh district.

Institute of Transport.—The Henry Spurrier Memorial Lecture will be delivered before the Institute of Transport at the Jarvis Hall (R.I.B.A.), 66, Portland Place, London, W.1, on December 10, at 5.45 p.m., when Mr. C. T. Brunner will read a paper entitled "The Pattern of the Oil Industry."

Cordoba Central Trust Limited.—The report of the directors of the Cordoba Central Trust Limited for the twelve months ended June 30, 1951, shows a gross income of £6,956, expenses in London and Buenos Aires, including taxation, amounting to £6,823. The lawsuit instituted against the company by the Argentine Government Railway Pension Fund authorities in respect of which a substantial part of the funds of the company is embargoed is still pending.

Western Region Branch-Line Closing.—Passenger train services between Cowbridge and Llantrisant, Western Region, British Railways, will be permanently withdrawn as from November 26. This six-mile branch is at present served by ten trains daily in each direction, and on their withdrawal stations at Llanharry, Ystradowen, Trerhyngyll, and Cowbridge will be closed. A bus service is available and a lorry service will be provided for parcels traffic.

International Mechanical Engineering Congress.—The fourth International Mechanical Engineering Congress will be held in Stockholm from June 4-10, 1952, when the discussions will be centred on improvements of materials used in engineering manufacture. The congress is organised by trade associations serving the mechanical engineering industry of twelve European countries. A meeting of the organising committee was held in London recently, under the chairmanship of Mr. A. W. Berry, Director of the British Engineers' Association, 32, Victoria Street, London, S.W.1, from which office information concerning the fourth congress can be obtained. Visits to the works of Allmänna Svenska Elektriska A.B. (Asea), A.B. Atlas Diesel, A.B. Scania-Vabis, Svenska A.B. Gasaccumulator (AGA), A.B. Svenska Metallverken, and Telefon A.B., L. M. Ericsson have already been arranged and there will be an optional tour of the principal industrial centres of Sweden.

International Nickel Co. of Canada Ltd.—The report of the International Nickel Co. of Canada Ltd. and its subsidiaries for the three months ended September 30, shows net earnings of $16,349,814 after meeting all charges. This is equivalent after allowing for the preferred dividends to $1·09 a share on the common stock. For the three months to June 30 net earnings were $14,653,656, or 97 cents a share.

Glenfield & Kennedy Limited.—The directors of Glenfield & Kennedy Limited announce an interim ordinary dividend of 5 per cent. on capital as increased by a bonus of 100 per cent. Last year an interim of 5 per cent. was followed by a final of 20 per cent. on the smaller capital. The present payment is in line with the statement at the last annual general meeting that the directors proposed at the first opportunity to adjust the interim dividend so that it might represent a somewhat greater proportion of the total dividend for the year.

Engine Naming Ceremony at Derby.—The band of the Derbyshire Yeomanry, members of the Old Comrades Association, and a Regimental Guard of Honour, were in attendance at Derby Midland Station on November 10, when Colonel Sir Ian Walker, Colonel of the Regiment, officially named London Midland express locomotive No. 45509 *The Derbyshire Yeomanry*. Colonel Walker afterwards took the salute at a march past. Regimental crests presented by Lt.-Colonel J. Crompton-Inglefield, Commanding the Regiment, were fixed above the engine nameplate. This locomotive is one of fifty-two L.M.R. 4-6-0 "Patriot" class passenger tender engines, and was built in the railway workshops at Crewe in 1932, being numbered originally 6005. The engine was renumbered 5509 in August, 1934, and was given her present number in September, 1949.

Tube Investments Limited.—The board of Tube Investments Limited has considered the results for the year ended August 4, 1951, and decided to recommend a final dividend on the ordinary stock of 12½ per cent. actual, making 25 per cent. for the year. Trading profits, after providing for depreciation, totalled £7,431,189, against £6,024,839, and provision for taxation £4,732,894, against £3,583,223. Production, turnover, exports, and profits again reached new high records, though shortages of raw materials have been increasing in severity during the year, and latterly output at a reduced level has been maintained by using up steel stocks. The directors have also resolved that half-yearly dividends be paid at the authorised rates on the 7 per cent. cumulative first preference stock and the 4½ per cent. redeemable cumulative preference stock.

Pullman Car Co. Ltd.—The net profit of the Pullman Car Co. Ltd. for the year ended September 30 amounted to £62,700 as against £61,819 last year, after providing for maintenance and depreciation and taxation. The directors recommend a final dividend of 6½ per cent. on the "A" and "B" ordinary shares, making 10½ per cent. on the capital increased by a 20 per cent. share bonus, against 12½ per cent. on the smaller capital.

Peruvian Corporation Limited.—A net revenue of £51,958, against a debit balance of £174,964, is recorded by the Peruvian Corporation Limited in its preliminary statement for the year ended June 30, 1951. Subject to final audit, revenue from the railways and lake steamers amounted to £701,718, against £511,475. Operating expenses, renewals, and other expenses aggregated £528,381, against £397,234, leaving £210,408, as compared with £131,053. Net revenue of subsidiaries brought into the accounts amounted to £304,012, while debenture service accrued during year, but not paid, including interest on arrears of interest and taxes to June 30, 1951, totalled £462,462, against £434,006. No dividend has been paid on the £9 million ordinary and the last payment on the £7½ million 5 per cent. non-cumulative preference was 3 per cent. for 1929-30.

British Railways (Western Region) Ambulance Centre.—The annual presentation of British Railways (Western Region) Ambulance Centre awards, for the Worcester District took place recently. Mr. W. J. Morris, Assistant District Operating Superintendent, Western Region, presided, and was supported by Messrs. R. Burgoyne, Regional Staff Officer, who was accom-

panied by Mrs. Burgoyne, Mr. C. H. Adey, District Commercial Superintendent, W. E. Blakesley, Motive Power Superintendent, P. Anstey, Regional Ambulance Secretary, and J. A. Martin, Assistant Regional Ambulance Secretary, C. E. Drew and C. A. M. Peaty, Assistant Commercial Superintendents, E. H. Garfield, District Operating Superintendent, Birmingham New Street (L.M.R.), and Dr. Hiren De. The first-year certificates and class awards were presented by Mr. Burgoyne and the long-service medals and bars by Mrs. Burgoyne.

Crompton Parkinson Limited.—The net income of Crompton Parkinson Limited for the twelve months ended June 30, after charging depreciation, taxation, and so on, was £489,245, against £491,335. The consolidated net income amounted to £550,128 as compared with £560,710. The directors recommend a final dividend and cash bonus each of 3¾ per cent. on the ordinary and "A" ordinary stocks, making a total for the year of 11¼ per cent., the same as last year.

Forthcoming Meetings

November 24 (*Sat.*).—Scottish Society of Students of the Locomotive, at the Grand Hotel, Charing Cross, Glasgow, at 7.15 p.m. "An Attempted Comparison of Scottish and South Country Running Conditions," by Mr. O. S. Nock.

November 24 (*Sat.*).—Irish Railway Record Society, Fifth Annual Dinner, at Amiens Street, Station Restaurant, at 7 for 7.30 p.m.

November 24 (*Sat.*) to December 15 (*Sat.*). —Railway Ticket Exhibition, at Hove Public Library.

November 28 (*Wed.*).—Institution of Electrical Engineers, Savoy Place, London, W.C.2, at 5.30 p.m. "A Statistical Approach to Some Problems in Electricity Supply," by Mr. R. B. Rowson.

November 28 (*Wed.*).—Railway Students' Association, Annual Dinner & Dance, at the London Transport (South Kensington) Club. Reception by Mr. C. K. Bird, President, at 6.15 p.m., followed by dinner at 6.45 p.m.

November 28 (*Wed.*).—British Railways, Southern Region, Lecture & Debating Society, at the Chapter House, London Bridge, London, S.E.1., at 5.45 p.m. Debate: "That this house is of the opinion that in the railway service, too much importance is placed on academic qualifications."

November 29 (*Thu.*).—British Railways, Western Region, London Lecture & Debating Society, in the Clerks' Dining Club, Bishops Bridge Road, Paddington, London, W.2, at 5.45 p.m. Debate with Oxford University Railway Society.

December 1 (*Sat.*).—Historical Model Railway Society, at the headquarters of the Stephenson Locomotive Society, 32, Russell Road, London, W.14, at 3 p.m. Question time: "Do you know your railway history?"

December 1 (*Sat.*). — Electric Railway Society, at the Fred Tallant Hall, Drummond Street, N.W.1, at 3 p.m. Annual general meeting.

December 3 (*Mon.*).—Institute of Transport, Metropolitan Section, at 80, Portland Place, London, W.1, at 5.30 for 6 p.m. Annual General Meeting. "Independent Hauliers and the Transport Act, 1947," by Mr. W. Fraser.

Railway Stock Market

There has been a further heavy fall of values on the Stock Exchange where sentiment was affected by international uncertainties and by fears that further measures may have to be taken to stop the drain on sterling area gold and dollar reserves. The immediate cause of the fresh downtrend has been another fall in British Funds on the prospect of a further possible increase in the Bank rate. War Loan 3½ per cent. has fallen to a new low level and with yields on British Funds again increased, there has been a trend to higher yields in all other sections including industrial ordinary shares. The latter were also affected by the fact that buyers are awaiting the E.P.T. plan.

Despite the fall in British Funds and leading industrial shares there has been no big revival of interest in overseas securities although German and Japanese bonds remained active. Nevertheless, many brokers think that overseas securities including foreign rails, may tend to attract a good deal more attention before long, because there may be a widespread tendency to switch from shares of industrial companies which will be hit by E.P.T. But at the time of writing foreign rails have come back with the general trend.

After their recent advance on the revived talk of another takeover move United of Havana stocks have relapsed and the 1906 debentures have come back to 19⅝. Leopoldina debentures also eased after their recent rally although there now seems no reason to expect any further delay by Brazil in releasing the take-over money. The 6½ per cent. debentures have changed hands around 146 and the 4 per cent. debentures around 97½. Leopoldina ordinary and preference stocks eased further to 10¼ and 27. Manila "A" debentures have been steady at 76 with the preference shares at 8s. 9d. San Paulo 10s. units became rather more active, but, at 15s., were slightly lower on balance. In other directions Taltal shares were back to 20s. 1½d. with Nitrate Rails steady at 25s. 6d. Mexican issues eased, the Central "A" bonds to 89, while La Guaira ordinary stock was 95 and Bolivar "C" debentures 48.

Antofagasta ordinary receded to 18⅞, and the preference to 76, both of which nevertheless remained active. The market realises that in view of the substantial arrears of dividend on the preference stock it will probably be a long time before the ordinary stock can return to the dividend list unless it were possible to devise a means of funding the preference arrears and reorganising the capital to some extent; and because a scheme of this kind would be difficult to effect it is regarded as unlikely. Brazil Rail bonds were 5½, and Leopoldina Terminal 5 per cent. debentures at 97 have eased with the tendency in Leopoldina stocks. Canadian Pacifics at $67½ have reflected the trend of markets, and dollar stocks in particular, although it is being assumed there are good prospects of a higher dividend. This week there has been revived talk that the company might decide to segregate its railway assets from its other assets and interests by the formation of a separate company; but no importance is attached to this.

Engineering and kindred shares have come back with the general trend on the Stock Exchange. Guest Keen were down to 50s. 6d., Vickers to 46s. 9d., Cammell Laird to 12s., and T. W. Ward to 78s. 3d., while in other directions Powell Duffryn were 34s. 1½d. B.S.A., at 41s. 3d., eased because of the unchanged dividend, though a good impression was created by the big increase in profits. Looking ahead, the market believes that John Brown, Guest Keen, and other companies whose steel assets have been nationalised and whose compensation has been used to acquire new interests, may have to raise a good deal of additional money in the future if they have an opportunity to buy back their steel interests.

Hurst Nelson were 62s. 6d., Birmingham Carriage 38s. 1½d., Beyer Peacock 32s. 9d., Vulcan Foundry 25s. 9d., Charles Roberts 26s. 1½d., and North British Locomotive 18s. 9d. Gloucester Wagon eased to 14s. 9d. and Wagon Repairs were 12s. 3d.

EAST KENT ROAD CAR CO. LTD.—After providing £53,500, against £36,000, for taxation, and £105,483 against £89,867, for depreciation, the net profit of the East Kent Road Car Co. Ltd. for the year ended September 30 was £153,506, against £223,971. The directors recommend a final dividend of 10 per cent. and a bonus of 10 per cent., making 25 per cent. for the year, as before.

Traffic Table of Overseas and Foreign Railways

	Railway	Miles open	Week ended	Traffics for week: Total this year	Traffics for week: Inc. or dec. compared with 1949/50	No. of week	Aggregate traffics to date: Total 1950/51	Aggregate traffics to date: Increase or decrease
South & Cen. America	Antofagasta ...	811	9.11.51	£ 124,080	+ £ 39,150	45	£ 5,456,610	+ £ 2,469,226
	Costa Rica ...	281	Oct., 1951	c1,244,055	+ c228,863	18	c4,947,302	+ c586,239
	Dorada	70	Oct., 1951	36,894	— 515	43	361,117	— 30,116
	Inter. Ctl. Amer....	794	Sep., 1951	$923.671	— $76,767	39	$9,945,698	— $281,585
	Paraguay Cent. ...	274	9.11.51	₲317.281	+ ₲89,579	19	₲6,324.392	+ ₲2.631,968
	Peru Corp. ...	1,050	Oct., 1951	$8,381,000	+ $622,000	18	$32,898,000	+ $1,692,000
	,, (Bolivian Section)	66	Oct., 1951	Bs.18,324,000	+ Bs.5,859,000	18	Bs.59,719,000	+ Bs.16,745,000
	Salvador	100	Sep., 1951	c115,000	+ c40,000	13	c381,000	+ c113,000
	Taltal	147	Oct., 1951	$1,639,000	+ $317,000	18	$7,943,000	+ $2,142,700
Canada	Canadian National†	23,473	Sep., 1951	17,646,000	+ 279,000	39	153,415,000	+ 21,228,000
	Canadian Pacific† ...	17,037	Sep., 1951	11,990,000	— 247,000	39	105,001,000	+ 14,030,000
Various	Barsi Light* ...	167	Aug., 1951	22,500	— 1,785	21	191,250	+ 31,920
	Egyptian Delta ...	607	10.4.51	17,513	— 267	4	17,513	— 267
	Gold Coast ...	536	Aug., 1951	220,509	+ 16,972	21	1,280,126	+ 109,832
	Mid. of W.Australia	277	Sep., 1951	62,508	+ 23,733	13	169,896	+ 59,039
	South Africa ...	13,398	20.10.51	1,992,985	+ 224,602	29	54,933,164	+ 6,632,454
	Victoria	4,744	July, 1951	1,732,775	+ 23,478	4	—	—

* Receipts are calculated at 1s. 6d. to the rupee † Calculated at $3 to £1